

HOME OWNERS' CATALOGS



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HOME OWNERS' *Catalogs*



"HOME, SWEET HOME"

A GUIDE TO THE SELECTION OF BUILDING MATERIALS EQUIPMENT AND FURNISHINGS

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FOREWORD

• Home Owners' Catalogs is sent to you in the belief that it will help you derive greater satisfaction from your new home. You will find it of real assistance as a reference work and a valuable aid in the selection of building materials, equipment and furnishings.

• Building a home is more than a romantic experience. Intensely practical aspects are involved, and the satisfaction you derive over the years will depend largely upon the success with which you meet the practical phases of house construction. Of these no others are so important as Design and Plan. Design and Plan must be adjusted to your Desires, your Needs, and your Budget. The architecturally trained man is better able to handle this phase of the home building operation than anyone else.

• Nevertheless, no one is as interested in your house as you are; you are going to pay for it; you are going to live in it. Once a material or an equipment goes in, it is there to stay. Once money is invested in furnishings, they are not to be discarded lightly. In taking care of this practical aspect of home building, nothing is more important than information.

• Home Owners' Catalogs is a mine of current, reliable information. In it you will find descriptions of products that will increase the comfort and convenience of your home, enhance its appearance, make it less costly to maintain, and add to its value as an investment. You will find products that are new to you, and desirable suggestions that may not have occurred to you. You will probably add Home Owners' Catalogs to your library and consult it from time to time, as you redecorate or add to your home.

History of Our

ARCHITECT

BUILDER

HOUSE STARTED

HOUSE COMPLETED

HOUSE OCCUPIED

REMARKS

HOME ◆ ◆ ◆

STRUCTURAL WORK

EQUIPMENT

FURNISHINGS

SEE OUR CATALOG IN HOME OWNERS' Catalogs

INDEX OF FIRMS

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American Radiator Co.

Burnham Boiler Corp.

Carey, Philip, Co.

Crane Co.

Fitzgibbons Boiler Company, Inc.

Libbey-Owens-Ford Glass Co.

Masonite Corp.

Minneapolis-Honeywell Regulator Co.

Sisalkraft Co., The

Streamline Pipe and Fittings Division
Mueller Brass Co.

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NOTE: To use this index it should be borne in mind that all catalogs in this volume are ARRANGED ALPHABETICALLY BY FIRM NAME. Therefore, to locate information on a given product as listed in this index, it is necessary only to note the name or the names of the firms given under the product in question, and then turn to the catalogs of those firms as they appear in alphabetical sequence.' The noun method has been used as the basis for compilation of this index. At the same time, for your convenience, we we have followed common usage in indexing some products, such as Air Conditioning Equipment, where the noun covers a wide variety of products. Cross reference is used to aid you in finding information you seek.

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Fitzgibbons Boiler Company, Inc.
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Minneapolis-Honeywell Regulator Co.

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Downspouts
See Downspouts, Copper
Flashings
See Flashings, Copper
Gutters
See Gutters, Copper
Roofing
See Roofing, Copper
Tube
See Tube, Copper

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Wall—Glass
Libbey-Owens-Ford Glass Co.
Vitrolite Division

Dampproofing
See Waterproofing

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Crane Co.

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American Brass Co.

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Radiator
American Radiator Co.

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Concrete
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Crane Co.

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Deadening, Roofing
Carey, Philip, Co.

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Burnham Boiler Corp.
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Fitzgibbons Boiler Company, Inc.
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See Glass

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ANACONDA

COPPER BRASS & BRONZE

Throughout Your Home

ROOFING

WATER PIPES

HEATING LINES

HOT WATER TANKS

SCREENS

WEATHER-PROOFING

DAMP-PROOFING

THE AMERICAN BRASS COMPANY

GENERAL OFFICES · WATERBURY · CONNECTICUT

THE BEAUTY • VALUE • ECONOMY OF YOUR NEW HOME

cannot be maintained for long unless you guard against RUST.• Therefore consider carefully all the advantages and the economy of these durable, non-rusting

ANACONDA PRODUCTS

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ANACONDA
from mine to consumer
REG. U.S. PAT. OFF.

COPPER, BRASS AND BRONZE

in the Home



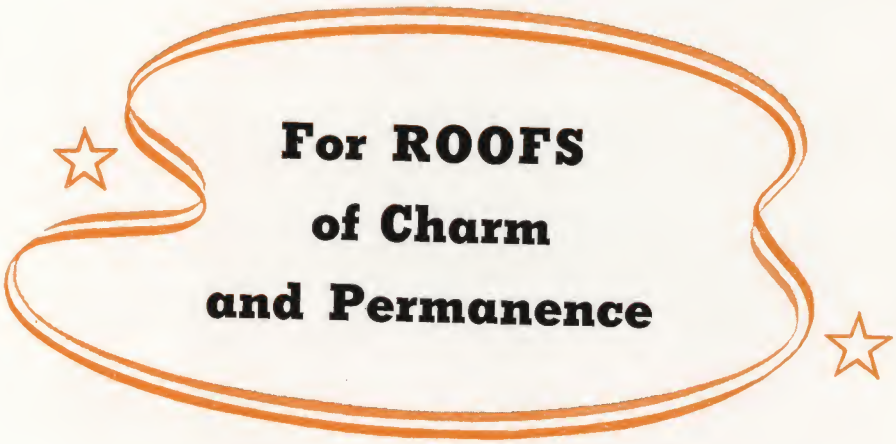
IN BUILDING A NEW HOME, you naturally want the most value for every dollar you spend. To make certain of this, care must be exercised to distinguish between what is really important and what only *seems* important. There are many desirable things—accessories that are useful but not essential—on which action can be postponed.

But there are other things that are vital; matters of sound construction—*fundamental* things, too often overlooked, that mean so much to the enjoyment of your home in after years. Such things, for example, as water pipes and storage tanks . . . roofing, roof flashings, gutters and rain pipes . . . window and door screens.

These items, all of them important, are frequently neglected because they seem but incidentals; neglected in some instances so badly that they soon constitute a burden of upkeep and repair expense that strains the family budget and takes from home ownership much of the pleasure it should rightfully hold.

The ANACONDA PRODUCTS *described on the following pages are giving rust-free, trouble-free service . . . and saving money . . . for thousands of homeowners who have had the foresight to provide for the future by spending a little more at first for rustless copper, brass and bronze.*





COPPER IS THE FINEST MATERIAL YOU CAN USE

FOR CENTURIES copper roofs have adorned palaces, cathedrals and state buildings throughout the world; for such monumental structures the superiority of copper roofing has long been recognized. It has provided both stateliness and charm, warmth yet dignity, and the economy of permanence.

* * *

To the home, copper roofing brings rich appearance and a note of character and quality. The effect becomes increasingly beautiful as the copper ages and attains the mellow antique color that is so highly prized and valued for decorative purposes.

* * *

Copper roofing, rustless and durable, combines to a degree unrivaled by any other material these important qualifications: It is water-tight, permanent in spite of time and weather, relatively light in weight, non-inflammable and safe against flying embers. Snow and ice do not adhere readily to its smooth surface. It is easily installed, and above all most economical over the years.

* * *

Copper roofing is now available at a cost which makes its use practical even for the small home—a cost well expressed in the name *Economy Copper Roofing*. This Anaconda product is described in detail on the following pages.



Designed by J. Robert Swanson, Architect, this home was built in a wooded section of Detroit, Mich.

ANACONDA

ECONOMY COPPER ROOFING

THE COPPER USED for the many outstanding roofs in this country and abroad has weighed 16 or more ounces to the square foot—resulting in a more costly roof than the average homeowner could afford.

With the development of ANACONDA ECONOMY COPPER ROOFING, an attractive standing seam roof of this time-tried metal can be installed according to traditional methods at a saving of approximately one-third the cost of sheet copper roofing heretofore used.

You may well wonder that this cost reduction could be achieved without some sacrifice in the important qualifications of watertightness, durability and beauty. The two-fold reasons are: 1—Narrowing the sheets to a width of 16 inches reduces seam spacing to a point in keeping with

smaller roofs, and makes possible the use of thinner metal without sacrificing the strength, rigidity and wind resistance obtained from thicker sheets with wider seam spacing. This new design has permitted establishing the weight of ANACONDA ECONOMY COPPER ROOFING at 10 ounces per square foot. 2—These lighter weight sheets, being more workable, are more easily and quickly formed and assembled by experienced sheet metal contractors. This reduces installation expense.

That a copper roof at such savings provides an entirely new standard of economy will be apparent from the following specific advantages:

Appearance—Copper increases in beauty with age and service. Under most atmospheric conditions, the metal takes on a color similar to statuary bronze and eventually acquires the characteristic, velvety green patina which blends so well with stone, brick, wood and foliage. This patina also serves a useful purpose in that it forms a natural protection for the copper underneath.

Durability—The durability of copper is traditional. The hottest sun cannot harm it. Below-zero weather leaves it unaffected. For generations copper roofs have protected Christ Church in Philadelphia, the Trinity Church in New York, and the State Capitol in Boston—to mention but a few well-known American examples. And in Europe there are countless instances of similar long-lasting installations.



This home in Darien, Conn., was roofed by the N. Hamilton Company of Stamford.



Economy Copper Roofing on a house in Marblehead, Mass., designed by Donald C. Goss, Architect.

Maintenance—A copper roof, correctly installed, requires no further attention. Of all forms of metal roofing, the standing seam type is the most satisfactory and inexpensive to install. It provides adequately for expansion and contraction.

Fire-Proof—A copper roof eliminates the flying spark hazard, thus earning a lower insurance rate.

Snow-Free—Snow and ice do not readily adhere to the smooth surface of a copper



Standing seam copper roofing is well adapted to homes like this one in Detroit, Mich. Earl Confer, Architect.



Copper roofing on still another type of architecture, in Newton Highlands, Mass. Built by Davis & Vaughan.



Note how gracefully Economy Copper Roofing can be curved as shown above on a Middlebury, Conn., house.

roof. This minimizes danger of leaks at flashings when banked up snow and ice melt.

Cools Faster—A home owner in Fort Worth testifies: "I am glad to report that this copper roof was much cooler than other types of roof that hold the heat in Texas sometimes after midnight. Anaconda Copper will cool off in 15 minutes after the sun goes down."

Protects Insulation—This protection is highly important. Water or moisture impairs the efficiency of cellular insulating materials. A correctly installed copper roof is not only water-tight, but completely *moisture-proof*—ideal construction for an insulated home.

Light Weight—Economy Copper Roofing is much lighter in weight than wood, tile, asbestos or slate. Hence a heavy, more costly supporting structure is unnecessary.

The Combination of these Advantages is Unsurpassed Value

The ideal roof for homes and cottages could well possess all of these important advantages. In addition, it should be easy and inexpensive to install, and should require a minimum of expense for maintenance. Anaconda Economy Copper Roofing fulfills all of these requirements. Compare it, point by point, with other roofing materials, and you will see why Anaconda Economy Copper Roofing offers unexcelled value.



1936 "Good Housekeeping House", designed by Dwight James Baum, Architect, and built in Wychwood, Westfield, N. J.

General Notes

Standing Seams—This type of joint is readily made, and has proved its efficiency in long service. The standing seam, which does not require solder, provides free movement for the expansion and contraction of the metal. Spacing between seams is approximately 13¾ inches.

Horizontal Seams—The seams at the ends of each pan are of the simple flat-lock type, ¾" lap, unsoldered. Horizontal seams are staggered.

Cleats—No nails penetrate the sheets themselves, which are kept in place by copper straps (cleats), nailed to the roof deck every 12 inches along each vertical seam, and cross seams if desired, with flat-head copper nails.

Valleys—Ten-ounce Copper is considered satisfactory, but where the valleys drain large roof areas or extra rigidity is desired, copper weighing 16 ounces per square foot should be used.

Soldering—Installation is made without the use of solder, except in unusual instances where soldering is absolutely necessary to make flashing joints watertight.

Pitch—Economy Copper Roofing should not be applied on slopes of less than four inches to the foot.

Sheathing—Boards should be laid solid without open joints, parallel to ridge. Sheathing boards are covered with 15-pound asphalt-saturated felt.

Re-Roofing—Anaconda Economy Copper Roofing is of course as suitable for old roofs as for new, but it should not be applied directly over old roofing materials.

ANACONDA SHEET COPPER

For non-rust Gutters, Rainpipes, Flashings



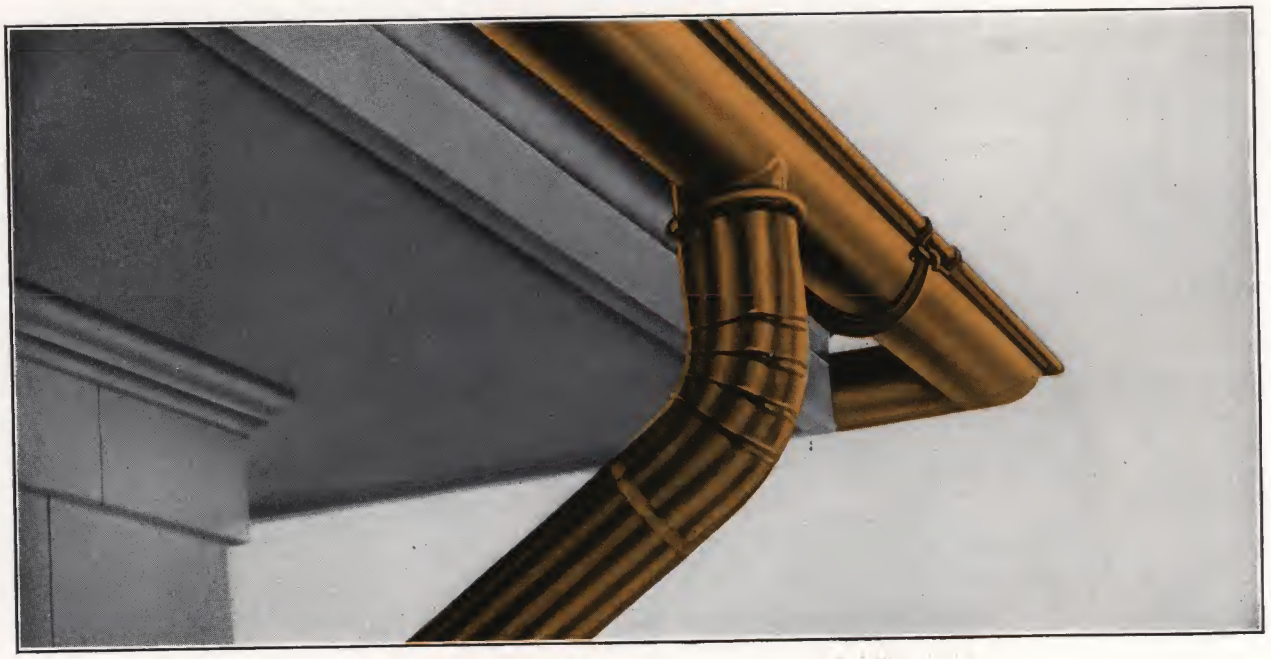
Many homeowners are insisting on copper. They have found that, no matter how "cheap" rustable gutters and rain-pipes seem to be, they always cost far more in the end.

REGARDLESS of the type of roofing, extreme care should be used in selecting the metal which is needed for the *roof drainage* system. Repairs and replacements are an item of future expense that can easily be avoided.

Valleys, gutters and rain-pipes should by all means be made of copper. Rain water, concentrating in the valleys and gutters, and rushing in flood volume to the downspouts, severely tests rust-weakened metal. That is why metals that rust usually last only five to eight years, while copper serves a lifetime.

The same is true of flashings—strips of metal used to weather-proof the roof wherever it comes in contact with chimneys, dormer windows or other projections. It is most important that the metal used be copper because ferrous flashings will soon rust, admitting water to rot the woodwork and perhaps to cause considerable damage to the interior of the house.

Copper sheet metal work is not expensive. Though it does cost slightly more in the beginning, it saves far more in the end by forever eliminating upkeep expense due to rust. Copper, for instance, never need be painted, but if ferrous metal is used, constant painting *to delay* rust adds another annoying expense.



CLEAN RUST-FREE WATER

FROM TROUBLE-FREE PIPING of COPPER or BRASS

A FULL FLOW of rust-free water—*at all times*. That is the demand of the tenant and owner, and the goal of the architect. The realization that rustable water pipe, resulting in eventual repair or replacement, is not economical, has led to a pronounced increase in the specification and use of brass and copper for water supply, heating and air conditioning lines.

Permanent Pipe Needed

The need for permanent pipe was not as great a generation ago as it is today. Then piping was exposed and accessible, and labor costs were lower. Replacements were expected, and relatively inexpensive. Nevertheless, there are many authentic records of 19th century brass pipe installations that have justified the foresight of their original owners by a half-century and more of trouble-free, uninterrupted water service.

Rust—the most common cause of pipe troubles—results in rust-colored water, reduced flow, and eventually in leaks. With present-day piping usually concealed behind walls and under floors, repairs and replacements cause serious expense and annoyance. The cost of pipe renewals usually amounts to many times the initial saving that rustable pipe seems to offer. Realizing this, it is logical that thoughtful homeowners are turning so generally to non-rusting metal—to avoid the possibility of future rust troubles.

Other factors further emphasize the need for permanent pipe. The corrosiveness of public water supplies is in itself a serious problem. Present standards of sanitation have broadly extended the chemical treatment of domestic waters, in many cases increasing their corrosiveness.

The effective resistance to corrosion that brass or copper pipe and copper tubes offer meets a nation-wide need. Correctly installed, they provide dependable and economical protection against pipe failures due to rust. Their additional cost is slight in relation to the total plumbing cost, and negligible in relation to the total cost of the home.

ANACONDA "85" RED BRASS PIPE

REG. U. S. PAT. OFF.

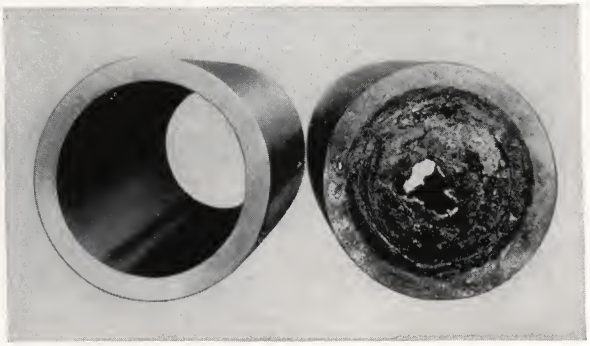
85% Copper—For Highly Corrosive Waters

WHERE THE CORROSIVENESS of water is known to be exceptionally severe, a permanent water supply can be assured only by use of pipe with extraordinary resistance to corrosion.

Such corrosive conditions are very often found in localities drawing on mechanically filtered supplies without further treatment. These waters may be relatively low in hardness, high in carbonic acid gas content and low in alkalinity—pH value 5 to 6.5. Ground waters from shallow artesian wells or large dug wells and colored waters from peaty sources usually fall under this classification. There is a growing tendency to treat such waters, not only to neutralize the carbonic acid gas, but to make the water high in alkalinity with pH value around 9 or 10. Anaconda 85 Red Brass Pipe is recommended for use with such types of water. It offers the greatest resistance to corrosion of any water pipe commercially obtainable at moderate cost.

Anaconda 85 Red Brass Pipe is also recommended for underground service lines assembled with threaded connections.

There are certain conditions, depending upon the character of the water, when 85 Red Brass Pipe should be tinned. Additional information furnished on request.



This photograph shows brass pipe (left) and rustable pipe (right) after identical *service. This is a graphic illustration of the extent to which rust may interfere with service even though leaks have not developed.*

ANACONDA "67" BRASS PIPE

REG. U. S. PAT. OFF.

67% Copper—For Normally Corrosive Waters

ANACONDA 67 Brass Pipe can be depended upon to give lasting service in all localities where normal conditions prevail; that is, where the water has a low permanent hardness, a fair degree of temporary hardness, is low in carbonic acid gas content, or is only slightly alkaline.

Corrosiveness of Water is Subject to Change:

It should be borne in mind, however, that the corrosiveness of domestic waters is subject to radical changes, due principally to the introduction of new purification methods and to the need for additional sources of supply to meet the constantly growing requirements of most communities. As a result, waters that are only normally corrosive today may be highly so in a few years.

Consequently, when specifications call for standard-size pipe assembled with threaded "screw-type" connections, The American Brass Company recommends the use of Anaconda "85" Red Brass Pipe in every instance where it is not definitely known that the water supply is only normally corrosive, or where there is a possibility that changing conditions may in the future increase the corrosiveness of the local water supply.

ANACONDA COPPER WATER TUBES

For Low Cost, Rust-Proof Plumbing and Heating Lines

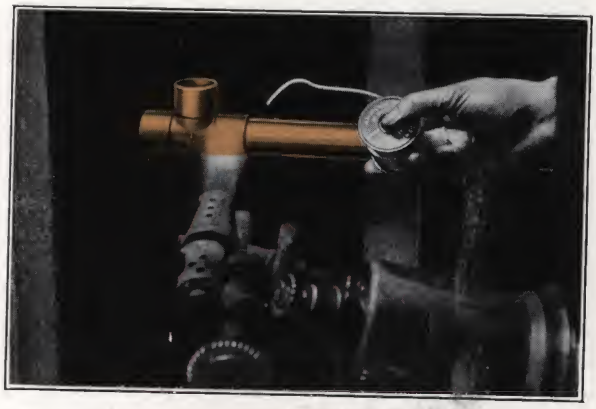
WHERE low cost is of primary importance, Anaconda Copper Tubes and Anaconda Solder-Type Fittings are finding widespread use. A complete installation costs but a little more than one of short-lived rustable pipe and fittings. This low cost is due to the fact that solder-type joints eliminate threading—making possible lighter tube walls, less weight per foot and a corresponding reduction in cost. Labor costs are also minimized. However, such important points as thorough cleaning, correct heat, proper fluxing and the right solder make it imperative to employ an experienced plumbing contractor.

Mechanically, such a piping system provides more than ample strength where conditions of pressure and temperature are normal. In this respect, copper tubes are ideally suited to hot and cold water lines in houses.

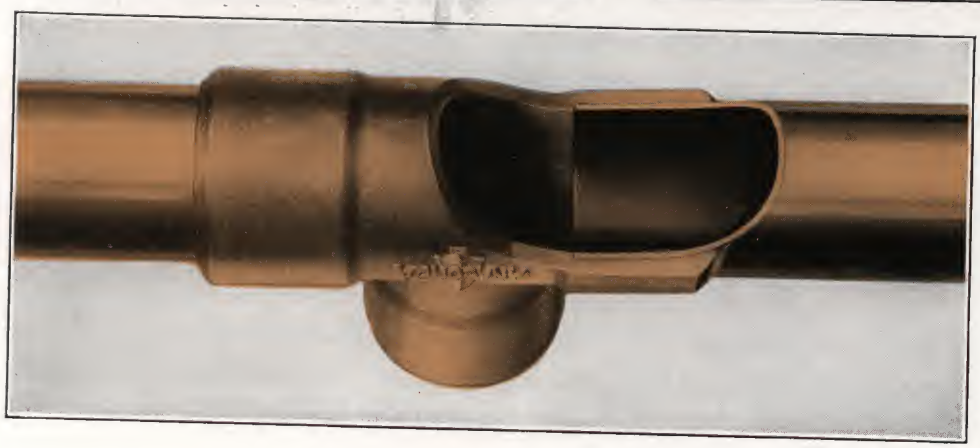
With rust-proof piping available at such reasonable cost, it is evident that its use affords definite, worthwhile savings, in addition to the convenience of a full flow of rust-free water, year in and year out.

Anaconda Copper Tubes are furnished in three wall thicknesses: Types "K", "L" and "M". Type "K", the heaviest, is furnished for underground service and general plumbing. Type "L" Tubes are suitable for interior plumbing. Although Type "M" Tubes have been used, Types "K" and "L" are preferred because their more substantial wall thicknesses provide a greater margin of safety.

There are certain conditions, depending upon the water, when copper tube lines should be tinned. Additional information furnished on request.







Cut-away section showing completed joint of tube and solder fitting. Note the generous depth of the cup and the accurate fit at the end of the tube. This practically eliminates resistance to the flow of water.

FOR HEATING LINES

Copper Tubes Speed Up Circulation, Cut Heat Losses, Give Greater Efficiency

An installation of Anaconda Tubes and Fittings increases the efficiency of hot water heating systems. Both tubes and fittings have smooth inside surfaces which reduce resistance to the flow of water . . . a feature which is especially valuable in forced circulation systems. Hot water, conveyed through bright, uninsulated Anaconda Copper Tubes, loses only about one-half as much heat as is lost when uninsulated black iron of the same nominal size is used. Heat conservation with copper is further increased with the use of smaller sizes—possible because of the permanent smoothness and durability of copper tubes. With quicker circulation and reduced heat losses, maximum heat is delivered to radiators in the least possible time.

Another advantage of Copper Tubes is that when installed without covering, the gleaming metal enhances the appearance of the cellar and basement room used for recreational purposes.

Anaconda Solder-Type Fittings

The natural law of capillary attraction is the principle on which the design of Anaconda Solder-Type Fittings is based. Metal workers have employed this principle for years in sweating sections of pipe together. Solder will flow by means of capillary attraction vertically upward between two closely fitted tubes to a height many times the distance required to make a solder joint, regardless of the size of the fittings.

* * *

Anaconda Fittings are available in both wrought copper and cast bronze. The complete Anaconda line includes a solder-type fitting for every copper tube requirement in plumbing, heating and drainage. Anaconda Copper Water Tubes are furnished both hard and soft. Both tubes and fittings are made to the accurate, standardized dimensions so essential for sound, leakproof joints.



Look for the Anaconda trade-mark on fittings, and the name "Anaconda" stamped in copper tubes. It is your assurance of careful manufacture and dependable quality.

STRONG, NON-RUSTING

EVERDUR METAL

FOR

WATER TANKS

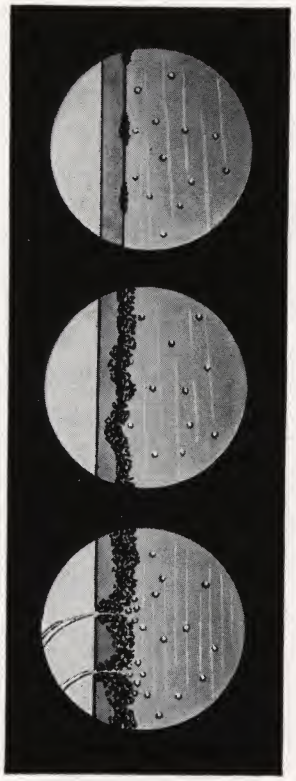
"EVERDUR" IS A TRADE-MARK OF THE AMERICAN BRASS COMPANY
REGISTERED IN THE UNITED STATES PATENT OFFICE.

PLENTY OF CLEAN HOT WATER

A PLENTIFUL SUPPLY of clean hot water is regarded as a necessity to health and comfort in the home of today. Yet sparkling hot water may be expected, year in and year out, only when the hot water tank is made of metal that cannot rust.

This is easy to understand—because hot water causes rust to form even faster than cold water.

A glance at the illustrations below reveals how rust, once started, continues to attack ordinary tank metal.



EVERDUR—Ideal Tank Metal

Steel and copper were long the standard materials for hot water storage tanks. Each possessed distinct advantages. Steel offered high strength and economical fabrication, but was subject to rust and corrosion which tainted water, and in time weakened tank metal to a point below the limit of safety. Copper has provided the corrosion-resistance so often essential to long, economical service, but has lacked the physical properties needed for economical tank construction.

Everdur Copper-Silicon Alloy combines the corrosion-resistance of pure copper with the tensile strength of steel. Moreover, its ease of welding makes it possible to manufacture Everdur tanks of virtually one-piece construction at lower cost than pure copper tanks, which are usually brazed and riveted.

SIZES AND TYPES

Everdur tanks in service today range in size from one gallon fuel containers for gasoline stoves to 20,000 gallon pressure vessels operating in chemical process work. They are in service in laundries, textile plants, hotels, hospitals, schools, office buildings, apartment houses and homes.

AUTOMATIC HEATERS

Because Everdur is so strong, and can be so economically and perfectly welded, important manufacturers of automatic gas, electric and oil heaters, with very few exceptions, have adopted Everdur tanks as standard equipment for rustproof models.

Everdur tanks provide high efficiency and most economical operation for underfired hot water heaters. There can be no accumulation of rust from tank corrosion at the bottom of the vessel to insulate the water from the heating element.

Further information on automatic heaters with Everdur tanks can be obtained from your local Gas or Electric Company, or your local plumbing contractor.

TESTING EVERDUR TANKS

Everdur tank units for domestic heaters have been subjected to the most drastic tests. One manufacturer making an all-welded tank from Everdur plates applied a test known as the "breather." It consists of pulsating pressure in the tank from 0 to 150 pounds, 13 times a minute. Five hundred hours of this test are considered the equivalent of 20 years of normal service. Everdur tanks have been held on this test for over 1,000 hours without showing signs of leaks or distortion.

This drastic test demonstrates the great strength of Everdur Metal, but it must be remembered that under no circumstances should *any* domestic water tank, regardless of the metal of which it is made, be operated without a suitable pressure relief valve.



Typical welded Everdur tank as used in automatic water heaters.

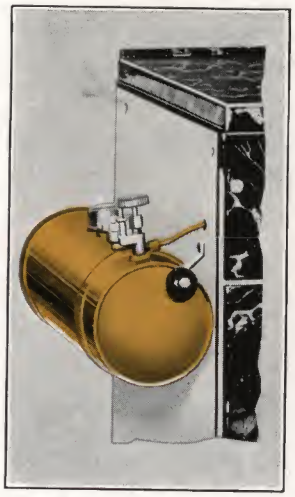


EVERDUR STORAGE TANKS (Range Boilers)

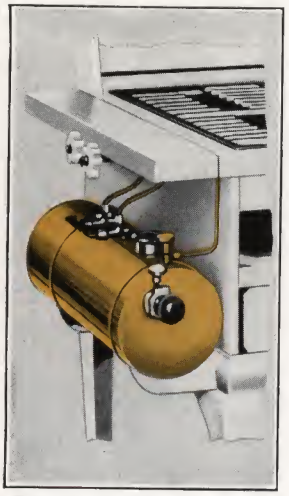
When an automatic storage heater is not used, the hot water is generally kept in a storage tank, or "range" boiler. Thirteen leading manufacturers of such tanks have adopted Everdur Metal for non-rust units.

Used with the different types of independent heating units, range boilers in the past have been made principally of steel—although copper has always been used in sections of the country where the water supply is highly corrosive. However, welded Everdur tanks have offered many production economies, with the result that the price differential between the rusting and non-rusting kind has been considerably reduced.

Home owners, no longer content with rusty hot water, or frequent repairs and periodic replacements, are installing welded Everdur storage tanks. These are generally available from plumbing contractors in all standard sizes and for standard pressures.



Everdur gasoline stove fuel tank. American Gas Machine Co., Albert Lea, Minn.



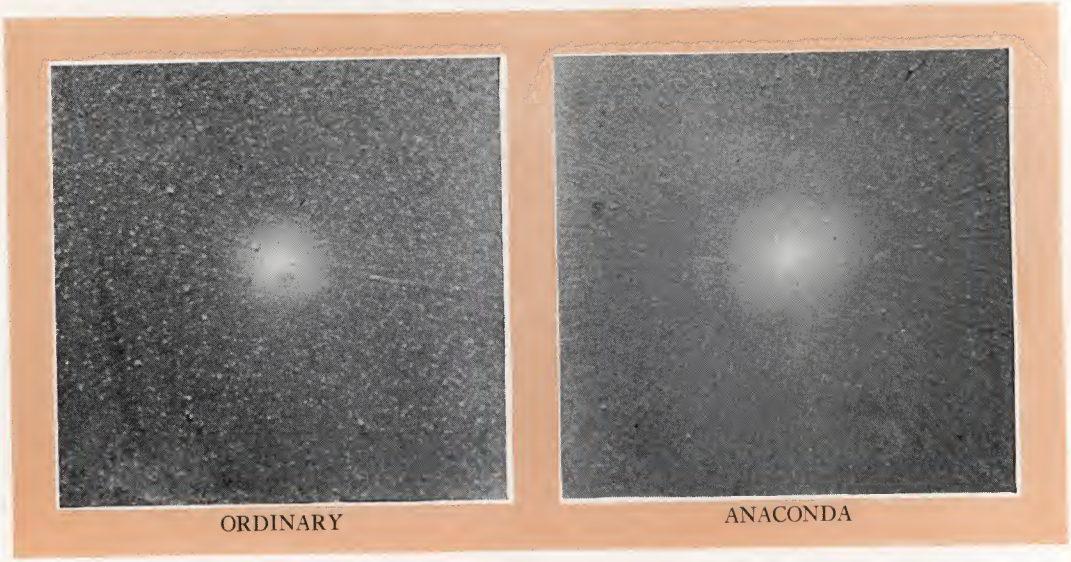
Everdur gasoline stove fuel tank. Coleman Lamp & Stove Co., Wichita, Kansas.

FUEL TANKS, TOO,
are being made of Everdur

Gasoline-fired ranges, stoves, radiant heaters and other similar equipment are available with fuel tanks of welded Everdur. Being strong, and highly resistant to corrosion, Everdur gasoline tanks provide maximum safety.

For better, more durable paint

ANACONDA WHITE LEAD



The paint films shown above were prepared by dropping paint on rapidly whirling glass plates, thus retaining a very thin film which outlines granular particles. As shown, ordinary lead paints are sandy in comparison with ANACONDA.

Today as always, white lead paint is regarded as best for exterior gloss and interior flat uses. Furthermore, at today's low prices (Summer, 1938) white lead costs no more per gallon than most other paints. But, of more importance, no paint serves at less cost per square foot per year than white lead. White lead covers better, goes farther and spreads faster. This means fewer gallons and fewer hours on the job. Lasting longer, washing well, wearing evenly, white lead leaves a smooth surface for repainting.

Why ANACONDA White Lead?

Anaconda White Lead is whiter, brighter, smoother, and purer than any other white lead —because it is the only white lead made by Electro-Chemistry. This patented Anaconda process automatically excludes the impurities found in ordinary white lead. Rigid control throughout manufacture permits over 80 physical, mechanical and chemical tests *daily* to insure *perfect uniformity*.

Test comparisons of Anaconda and other white leads show that Anaconda is definitely whiter and brighter. Homes painted with Anaconda White Lead *do* look fresh longer. And for interior flat paints, the extreme whiteness of Anaconda White Lead makes possible cleaner, purer tints—particularly important when you want the full beauty of delicate pastel shades. Thoroughly ground in the finest linseed oil, it is available through leading paint jobbers and dealers. For further information on Anaconda White Lead, check and use the postcard on page 27.



ANACONDA WHITE LEAD IS MADE BY INTERNATIONAL SMELTING AND REFINING COMPANY, PIGMENT DIVISION, EAST CHICAGO, INDIANA (SUBSIDIARY OF ANACONDA COPPER MINING COMPANY).

SEALING YOUR HOME WITH COPPER

ANACONDA *"Electro-Sheet"* COPPER

A RECENT DEVELOPMENT by the technical staff of the Anaconda Copper Mining Company now makes it possible to damp-proof and weatherproof your home with permanent copper for very little more than you would have to pay for the perishable materials that have necessarily been used in the past.

This new material, known as "Electro-Sheet", is pure copper produced in very thin gauges by electrical deposition. It is strong and ductile, and provides a lasting seal against wind, weather and moisture. It affords invaluable protection to cellular insulating materials. In winter, it keeps cold out and heat in; in the summer it helps to keep the house cool.

"Electro-Sheet" Copper may be employed wherever building paper is used, and applied by much the same methods. And it costs but little more than high grade building paper.

Applied to foundation walls and cellar floors it keeps basements dry. The foundations and walls of a house damp-proofed and weatherproofed with "Electro-Sheet" are virtually encased in an envelope of enduring Copper.

Anaconda "Electro-Sheet" Copper for damp-proofing and weatherproofing is available in 30, 50, and 60-inch widths and weights of 1 ounce and 2 ounces per square foot, either plain or bonded to felt, papers or rubber compounds.

WEATHER-PROOFING AND DAMP-PROOFING

It is generally recognized that both comfort and heating economy in a home depend to a great extent upon the efficiency of the outside walls in acting as a barrier against heat, cold, wind and dampness. The tendency towards equalization of temperatures between the inside and the outside is brought about principally by two causes—infiltration and conduction.

INFILTRATION is the passing of cold or warm air, moisture or dust through the joints and pores of ordinary building materials.

"Electro-Sheet" Copper is not subject to deterioration and when applied as shown on the next page provides a permanent air-tight barrier. It affords the most economical and practical method of preventing infiltration through the surfaces to which it is applied.

CONDUCTION through a building wall is the transference of heat in or out of the building due to the tendency of heat to pass through all materials in various degrees.

This may be overcome by installing cellular insulating materials, a practice which is being followed in many homes being constructed today.

Since most insulating materials are effective only when dry, it is quite important to have the insulation protected on the outside by a lining of "Electro-Sheet" Copper.

CLAPBOARD OR WOOD SHINGLE EXTERIORS

Clapboards or wood shingles as commonly applied to the exterior sides of buildings are never airtight and seldom completely weatherproof. In order to minimize infiltration from this type of wall a single ply of 1-oz. "Electro-Sheet" can be face nailed to the outside of the sheathing boards.

STUCCO EXTERIOR

Where stucco on metal lath is employed for outside wall facing, efficient waterproofing is of the utmost importance. One layer of 2-oz. "Electro-Sheet" applied in horizontal courses against the sheathing and securely held in position by furring strips will protect the sheathing against moisture.

BRICK OR STONE VENEER EXTERIOR

Brick or stone veneer outside a wood framed and sheathed house represents a common type of construction. A single ply of 2-oz. "Electro-Sheet" nailed onto the face of the sheathing, with the bottom flashed so as to lead any moisture penetrating through the veneer to the outside, will protect the woodwork from water both during construction and after. "Electro-Sheet" applied in this way also minimizes infiltration and makes the wall surfaces as nearly airtight as possible.

ATTIC FLOOR LINING

Loss of warm air by outward filtration is most marked at the roof because of the tendency of warm air to rise. By applying a thin membrane of copper to the top of attic joists, clamping the edges of the sheets down with furring strips, and nailing the attic flooring over the strips, two dead air spaces are created, which, with the practically airtight copper membrane, will have a very desirable effect as regards heating and air conditioning.

Maximum efficiency is achieved when this construction is used in conjunction with cellular insulation. The copper will protect the insulation from moisture, and will prevent the loss of heat by outward filtration.

VAPOR SEAL AGAINST CONDENSATION

Use of insulation and of air conditioning increases the possibility of condensation in building walls during cold weather. Tighter construction, by not allowing moisture to evaporate to the outdoors, also builds up higher relative humidities and increases the danger of harmful condensation within the walls. Under such conditions it is advisable



Copper Vapor Seal has been fastened to inside of studs over insulating material. As this room will be plastered, metal lath is shown partially applied (at top) over the copper.

to provide a vapor seal on the inside of the studding as well as a weatherproofing shield under the outside covering, particularly masonry veneer or stucco.

The preceding picture shows the application of "Electro-Sheet" Copper to the inside edge of the studs to serve as a vapor seal. Applied as indicated, with all laps tightly clamped, an impervious barrier is provided through which moisture-laden air cannot percolate to condense its vapor as water in the walls. At the same time this inside seal gives added protection against infiltration with a consequent greater saving in fuel.

CELLAR DAMP-PROOFING AND WATER-PROOFING

The most effective method of cellar water-proofing is the application of sheets or layers of water-proof material on the outside of the cellar walls. This keeps the masonry dry, resulting in a minimum of movement in the structural materials.

"Electro-Sheet" Copper is ideally suited for this use, because it is rust-proof, strong,

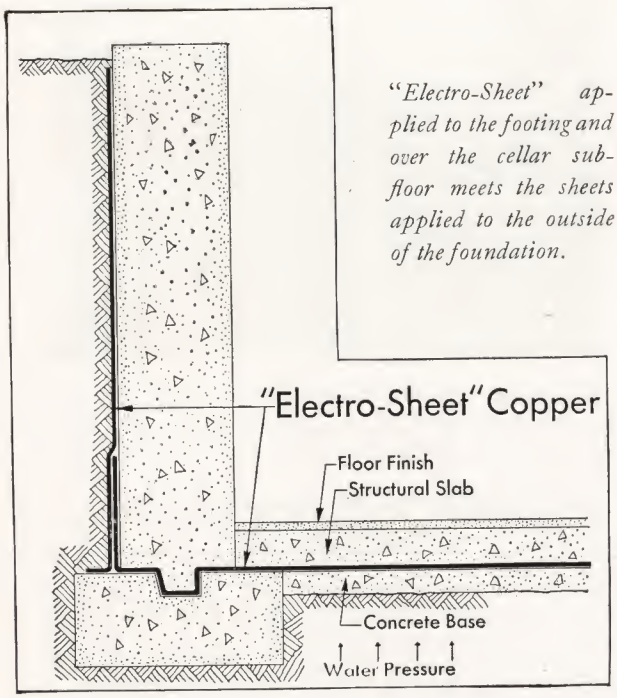


Applied with suitable mastic, this pure copper weighing 2 ounces per square foot is being securely bonded to the outside of foundation wall. Permanent damp-proofing!

ductile and can be applied readily. For water-proofing where a hydrostatic head exists, two plies of 2 oz. "Electro-Sheet" are usually applied with pitch, asphalt or other mastic. Where only damp-proofing is wanted, one ply should be sufficient. The "Electro-Sheet" is also applied to the concrete footing before the foundation wall is laid, extending through to join the "Electro-Sheet" water-proofing laid between the cellar sub-floor and the finished floor. This should provide complete protection against water and dampness entering the cellar.



"Electro-Sheet" plain or bonded to building paper will keep air and moisture from penetrating the walls.



"Electro-Sheet" applied to the footing and over the cellar subfloor meets the sheets applied to the outside of the foundation.

Architect Praises "Electro-Sheet"

. . . In the building of a frame house in Mariemont, Ohio, "Electro-Sheet" Copper weighing one ounce per square foot was installed between wall sheathing and siding, roof sheathing and shingles, and under the attic floor. The architect for this house has since written:

"During zero winter weather, this house is very easily heated with a hot water system for an insulated house of this size. Also, during the summer, when temperatures hover around 100 degrees, or higher for more than a week, the occupants state that the interior of the house is quite cool and comfortable. I can freely recommend copper used in this manner as a very economical means of preventing heat losses."

TERMITE-PROOFING

The most effective safeguard against termite damage is a copper shield inserted between the masonry foundation and sills. This shield, where it extends beyond the foundation wall, should be bent down at a 45° angle allowing a minimum of 2 inches between the edge of shield and the foundation.

Copper weighing 16 to 20 oz. per sq. ft. (the heavier is less liable to mechanical injury) has been used for some time in this manner. The material is relatively inexpensive, easily applied, highly effective and permanent. Any experienced sheet metal contractor can form and install copper termite shields.

For complete information on termite destruction and detailed methods for applying Copper safeguards, address The Copper and Brass Research Association, 420 Lexington Avenue, New York, N.Y.



WINDOWS and WEATHERSTRIPS

BRONZE WINDOWS NOW AVAILABLE AT ATTRACTIVE PRICES

WITH ATTENTION focused on heat conservation, insulation, air conditioning and other related subjects which all have a bearing on health, comfort and economy, the window rightly comes in for more and more scrutiny. For poorly fitted windows will set to naught the efficiency of thorough wall insulation. Primary requisites of the modern window are 1. Permanently tight, accurate fit; 2. Easy operation; 3. Maximum vision. Hence metal windows, particularly those of bronze, come into their own. Today standardization of design and increased production have resulted in attractive prices for bronze windows.

Both double hung and casement type windows are now available in enduring Bronze. Most of these are sold as a unit, complete with weatherstripping and glazing. Some double hung bronze windows compare favorably in price with ordinary wood windows. All offer definite advantages, and in general it may be said that durability, freedom from upkeep expense and important fuel savings more than make up for whatever slight extra investment is made in bronze windows.

BRONZE SASH CHAINS

Double hung windows are usually counterbalanced by sash weights at the end of ropes or chains operating over pulleys. Bronze sash chain is not expensive . . . yet it can never fray, rot or rust. Once installed, bronze chains insure smoother, easier operation—not for just a few years, but indefinitely.

BRONZE WEATHERSTRIPPING

Reliable authorities estimate that from 20% to 40% of heating costs are wasted every winter unless windows and doors are properly weatherstripped. Without weatherstripping, heat leaks out and cold seeps in—whether the windows are wood or metal. (For air-conditioned buildings, weatherstrips are a necessity). Surely you can't afford this waste, and surely you want the even, comfortable, *healthful* temperature you can maintain by weatherstripping.

And remember that careful, accurate installation of strips is all-important. If they aren't tight, and don't stay tight year after year, their inefficiency reduces your saving. For the best and longest service, use bronze.

Bronze weatherstrips can't rust, can't disintegrate. Tough and strong, they provide permanent "spring" qualities and the greatest resistance to accidental damage.

Anaconda Bronze is standard with leading manufacturers of metal weatherstrip. It is guaranteed by some for the life of the building.

For weatherstripping doors, extruded bronze saddles at the base add the finishing touch to the ideal job. They look well; they are tough, long wearing and efficient.

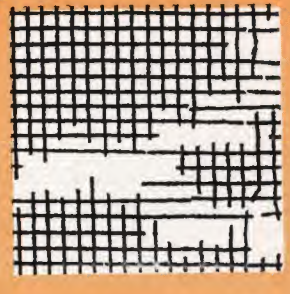
INSECT SCREENS OF BRONZE

Guard Your Health and Save Your Money

FROM the standpoint of expense, screens of Bronze Wire are the most economical you can use. Remember that screen wire is very fine and quickly rusts through if made of rustable metal. That is why well-built homes everywhere are equipped with screens of bronze wire. Bronze is strengthened copper. It cannot rust. Bronze Screens remain trim and tight for years with a minimum of attention—they do not even require painting.

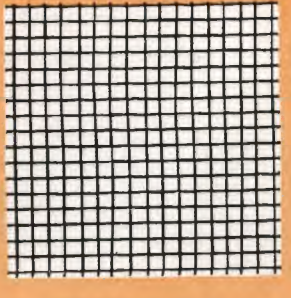
Instances are not exceptional where bronze screens have been in service for 30 years and are still in good condition. It may be conservatively stated that the life of Bronze Screening is limited only by accidental breakage. Yet its cost is so low (only about 40c more than rustable screening per full-window), that it pays for itself many times over during its long years of service.

Screens with bronze frames are readily available from leading manufacturers. Although costing more than wood frames, bronze frames can never warp or split, never need painting. They add a note of richness and distinction, not only when they are new but season after season—indefinitely.

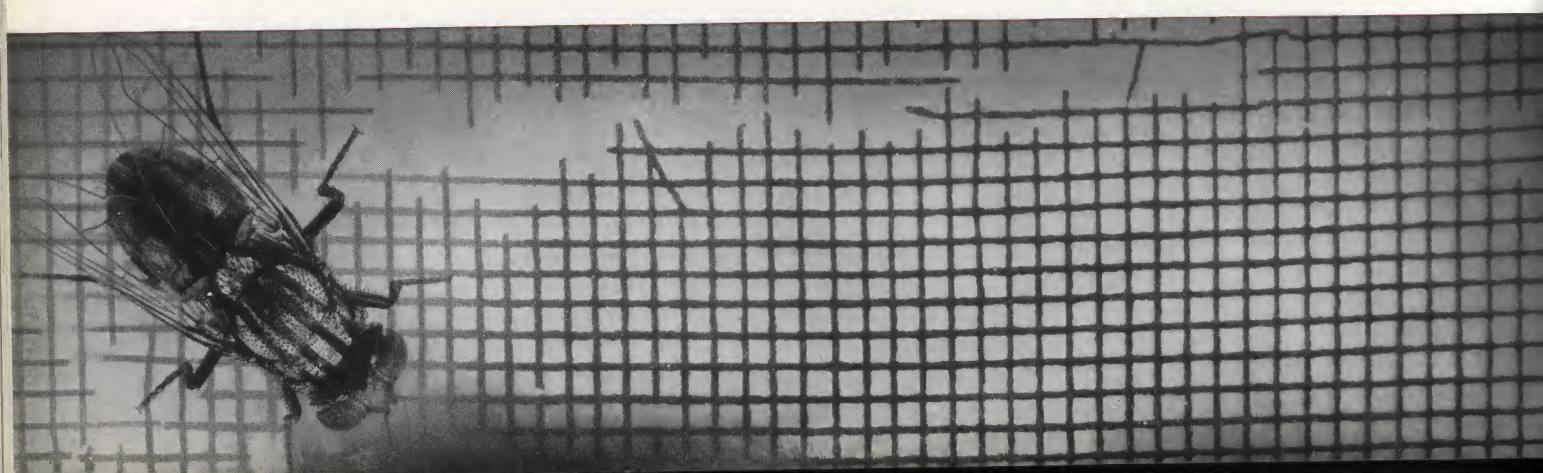


RUSTABLE SCREENING

Exposed side by side for the same length of time, the condition of this screen cloth speaks for itself. At the end of the test, the bronze was good as new.



BRONZE SCREENING



WARNING!

Insist on Standard Weight Bronze Screen Cloth

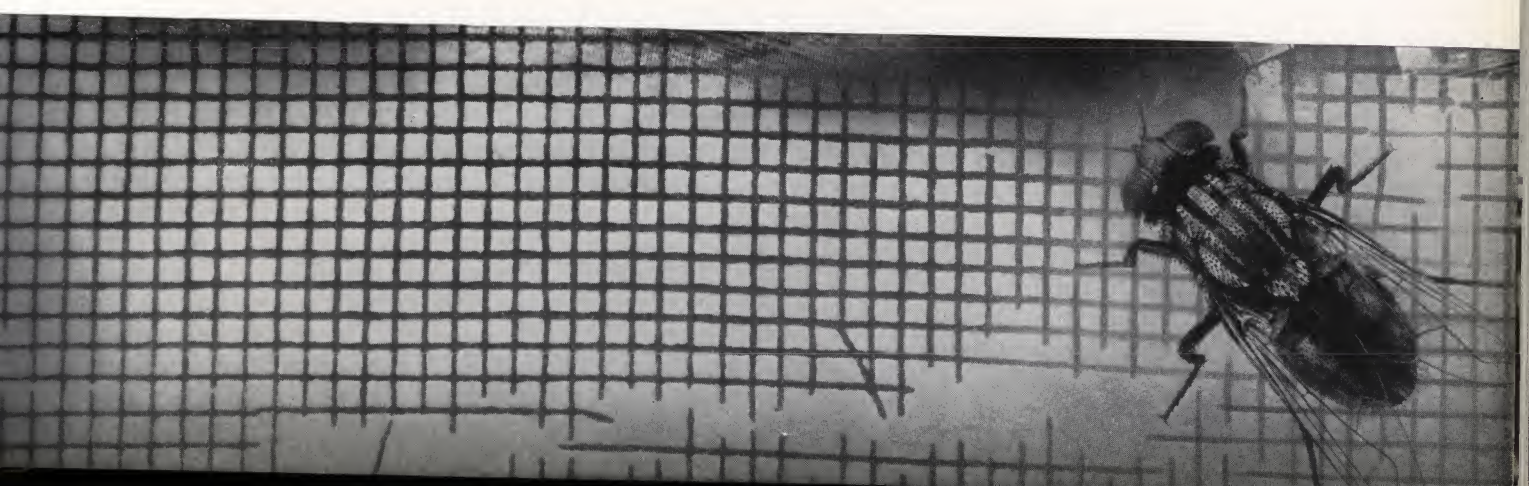
IN RECENT YEARS there has been an increasing amount of sub-standard bronze screen cloth made and sold in the United States. Although it represents only a relatively small portion of the total, the danger of obtaining it unknowingly is ever-present. So make certain that your bronze screen cloth is made of wire which measures .0113 inches in diameter. This is the standard set in specifications of the U. S. Government and the Wire Screen Cloth Manufacturers' Institute. Cloth made of this standard wire, woven 16 meshes to the inch, weighs no less than 15 pounds per 100 square feet.

The American Brass Company does not make screens or screen cloth, but as the leading manufacturer of Bronze Wire for use in the fabrication of screen cloth, we naturally wish to safeguard the reputation of Bronze for "lifetime" service. We are convinced that while sub-standard bronze screen cloth will satisfactorily resist corrosion, it lacks the physical strength to withstand the abuse to which all screens are occasionally subjected.

In your own interest, be sure that *your* bronze screen cloth is made of standard gauge wire—that "16-mesh" screening weighs 15 pounds per 100 square feet.

Only Standard Weight Bronze Screen Cloth

- Lies flat—does not bulge and twist
- Has a firm, solid "feel"—is easier to handle and frame
- Is a high strength material—does not dent easily
- Gives the long, expense-free service to be expected of bronze
- Weighs 15 lbs. per 100 sq. ft. in 16 mesh cloth



CONSULT YOUR ARCHITECT

FROM THE VOLUME of material presented between the covers of this book, it must be apparent to most homebuilders that the maze of new developments and improved building practices require the advice, consultation and planning which only an experienced architect can give. This has never been more true than it is today. For who better than your architect can coordinate all the information on hundreds of structural and engineering advancements, can tell you what is right, what is advisable, and then mold all desirable items into a unified whole—a house planned and built according to your taste—with everything considered in relation to everything else, and nothing left to chance.

ANACONDA METALS

No one will question that the better a house is built, the longer it will last, and the less it will cost for maintenance and repair in the years that lie ahead. In building, we urge you to consider this carefully, and to discuss it with your architect, builder and contractors. For sound construction goes beneath the surface to unseen things, where so often metals less durable than copper or brass prove far more costly in the end.

FURTHER INFORMATION

You can get complete information on any Anaconda product by writing to THE AMERICAN BRASS COMPANY, GENERAL OFFICES, WATERBURY, CONNECTICUT, or to any of the district offices and agencies listed on the following page.

THE AMERICAN BRASS COMPANY

General Offices: WATERBURY, CONNECTICUT

ANACONDA
from mine to consumer
REG. U.S. PAT. OFF.

MANUFACTURING PLANTS

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THE AMERICAN BRASS COMPANY OF TEXAS	6614 Harrisburg Blvd., Houston, Texas

IN CANADA:

ANACONDA AMERICAN BRASS LIMITED, *Manufacturing Plant & General Offices*, New Toronto, Ontario
MONTREAL: 1010 St. Catherine Street, West

ANACONDA PRODUCTS INCLUDE

COPPER · BRASS · BRONZE AND NICKEL SILVER

in every variety of SHEETS, WIRE, RODS *and* TUBES

5-38

Printed in U.S.A.

ANACONDA

COPPER BRASS & BRONZE

Throughout Your Home

ROOFING

WATER PIPES

HEATING LINES

HOT WATER TANKS

SCREENS

WEATHER-PROOFING

DAMP-PROOFING

THE AMERICAN BRASS COMPANY

GENERAL OFFICES • WATERBURY • CONNECTICUT


Swing
INTO RADIANT COMFORT
with American Radiator Heating and Air Conditioning



Your

HEATING CONTRACTOR IS HEADQUARTERS

for

HEATING AND AIR CONDITIONING EQUIPMENT

The selection and installation of the right heating or air conditioning equipment for your home call for expert advice and competent workmanship. The man who can give you both of these is your local Heating Contractor.

He will help you choose the right type of boiler, radiators, air conditioner, summer cooling fan or other products to provide the greatest comfort in your home for the least money. He will select the proper size equipment and install it with care and skill. The Heating Contractors of America are true craftsmen.

Your Heating Contractor can also arrange for easy FHA approved time payments on the American Radiator equipment you buy.

For further advice or information or the purchase of any of the equipment described in this book, see your Heating Contractor.

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GOOD AIR CONDITIONING BEGINS WITH

Good Heating

HALF A CENTURY OF EXPERIENCE SAYS

LOOK AT THE HEATING *First!*

By all means have air conditioning!

But before you decide on any air conditioning system, thoroughly examine the type of *heating* it includes.

Good heat is more important to you than any other function of air conditioning. You depend on it for your comfort and health eight long months of the year.

That is why the basis of every American Radiator Air Conditioning System is *radiator heat* . . . modern and best today, tomorrow and for years to come!

Once you put American Radiator heat in your home you can enjoy all the other benefits of an American Radiator Air Conditioning System whenever you like. Fresh, delightfully conditioned air through all the winter months; clean, cool comfort in summer; hot water for bath and kitchen the year round. You can install the complete air conditioning equipment in your basement when the heating is installed. Or add it later without changing the heating. *Without sacrificing the matchless comfort of modern radiator heat.*

These systems are not costly. You can afford this new healthful comfort at surprisingly low cost. If your home is already built, you can have an American Radiator Air Conditioning System installed right now and pay for it over a period of time on American Radiator's Better Finance Plan which your Heating Contractor can tell you all about.

AMERICAN RADIATOR HEATING *and* AIR CONDITIONING SYSTEMS GIVE YOU THE BEST KIND OF HEAT

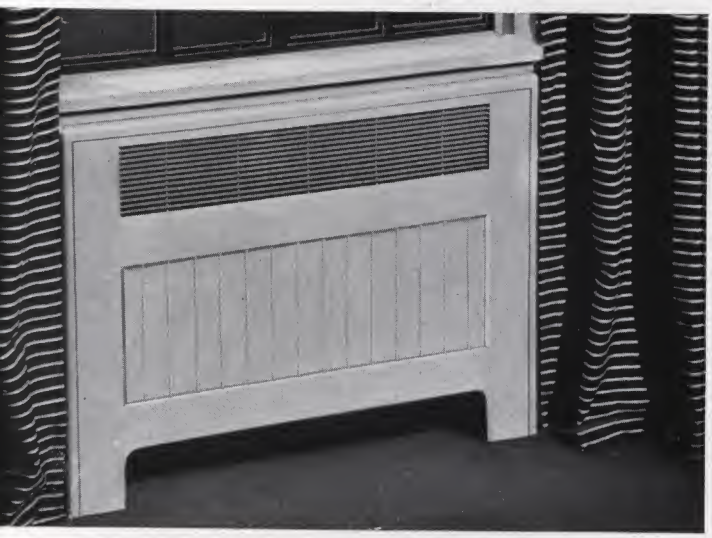
Radiant Heat from Radiators

plus air conditioning when you want it, the year round

You will discover in this book what amazing advances modern science has made in the field of *comfort.*

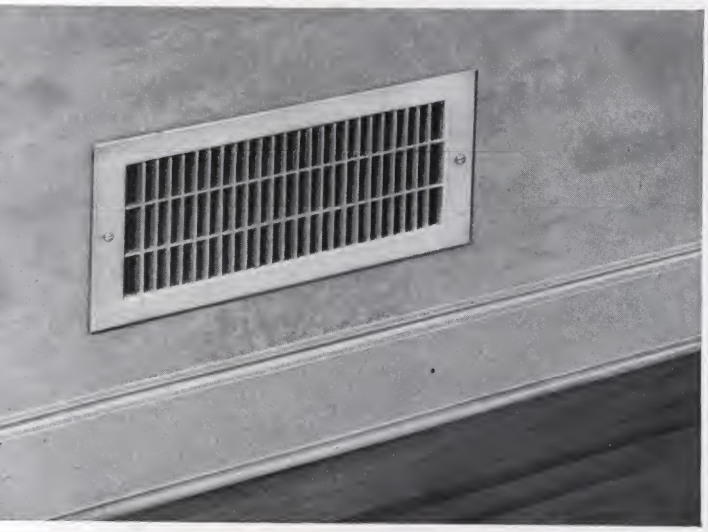
You'll read about radiant heat—and how science, taking its cue from nature, has given you radiant summer warmth, luxurious as sunshine itself. You'll learn how to have "country" air, refreshing as a drink of water. And how American Radiator's Institute of Thermal Research has now made it possible to enjoy both ideal radiant heat and air conditioning in a single, thoroughly practical system.

You'll be interested in the host of developments that make even the least expensive of the new radiator systems better than the best of the old! You'll approve the provision for hot water supply for bathing, laundry and housework. And you'll marvel at special controls that make your system into modern magic needing no human hand!



RADIANT HEAT FROM RADIATORS

Imagine June warmth, filling your rooms like sunshine! This is the kind of heat an American Radiator Air Conditioning System gives. It pours from small, slim radiators that can be recessed and concealed, taking no floor space at all. It warms you unfailingly, for drafts cannot turn it aside. In addition to this radiant heat that streams out into the room, American radiators are so designed that a thick blanket of comfortable warmed air flows upward, shutting off window cold.



CONDITIONED AIR FROM GRILLES

Then think of clean, refreshing, humidified air added to this perfect warmth, like the welcome breath of outdoors on a sunny day. The conditioned air enters your rooms through small, neat wall grilles, and its automatic control is conveniently separate from the heating. If you turn off the air conditioning on a cold day there is no break in luxurious warmth from your radiators. In summer, clean comfortable air is fed through the same grilles, if you wish to add cooling.

THIS IS THE SCIENTIFIC WAY TO CONTROL YOUR HEATING AND AIR CONDITIONING

. . . only *Radiator Heating* as the basis of an air conditioning system can give you *ALL* of these advantages

American radiators concealed beneath the windows of your home are a sign that you are not to be fooled about heating. You know that the first principle of comfort is the location of heat where it will best fight the cold—*under the windows!* That heat in the window zone is just as essential as light, air and sunshine.

Even with tight windows you know that cold sweeps in around the pane and down to the floor. Without heat in front of the window this cold air stream may be 15 degrees or more colder than the temperature of the room. So here's one advantage of radiators! You can conceal them *under your windows.* The entering air will mix with the heat, and instead of drafty floors you have cozy, comfortable warmth.

The modern radiators of an American Radiator Air Conditioning System are designed to be enclosed or recessed. They need not take any floor space. Have your radiators or enclosures painted to harmonize with the wall. Add modern Venetian blinds or dainty glass curtains. Frame the ensemble in colorful, graceful draperies so popular today. You'll make every window a picture—but a picture of comfort as well as charm.

Radiators give you other outstanding advantages you can get no other way. *Radiant* heat, that's absolutely dependable and never overheats the air. *Uniform* heat, luxurious and abundant in all the rooms, no matter how cold outdoors. *Controlled* heat, easy to keep at the temperature you prefer in every room in the house. *Automatic* heat, with a host of gadgets that do all the work for you. *Hot water,* loads of it for your bath and household use, can be part of your radiator system. And the heating plant takes so surprisingly little space you can make a recreation room in the cellar!



GOOD AIR CONDITIONING BEGINS WITH

Good Heating

1

AMERICAN RADIATOR HEAT

gives you

Warmth Like Sunshine

How good the sunshine feels, warming you through and through! So why not take heat like the sun indoors to fill your home with comfort. That's just what an American Radiator Air Conditioning System does, with its *radiant heat.*

Find out how thoroughly comfortable, how completely dependable is sunlike radiant heat. This is the healthful, gentle warmth that fills the "living zone" of the room. It blankets your knees and ankles, keeps you comfortable sitting down, and envelopes the children in warm draftless comfort even when they play on the floor. Radiant heat is *sure,* because it jumps right toward you instead of being carried by air. Drafts cannot turn it aside.

You feel thoroughly warm with radiant heat, even when the thermometer shows a relatively low temperature in the room. The air you breathe is neither stuffy nor overheated.

And this is especially important to remember: American radiators, in the new concealed style that is definitely of today, can be installed beneath your windows, taking not an inch of the floor space.

You'll thoroughly enjoy your windows with cozy heat just inside instead of a frigid zone. You'll have no cold drafts blowing across the floor. Radiant heat will flood the room like sunshine through your windows!



GOOD AIR CONDITIONING BEGINS WITH

Good Heating

2

AMERICAN RADIATOR HEAT

gives you

Warmth Without Work

Learn with American Radiator heating what carefree convenience can be! Go along with the thousands of home owners who now look forward to winter. Modern radiator heat, automatically fired and controlled, will banish forever the drudgery that used to make cold weather such a nightmare.

Wake up in the morning to the luxurious sensation of cozy warmth in which to bathe and dress. Know the joy of a warm house all day long without a trip to the cellar.

Dad will leave in the morning knowing his family protected by the best warmth he can provide, and that special controls and other automatic devices will do every bit of the work.

A day of shopping or an afternoon of bridge for mother, and back to a house as warm as when she left it. Even for a week-end or longer, American Radiator heating can completely mind itself.

Choose an American Radiator Air Conditioning System that is automatically fired, and make scarcely a trip to the basement the whole year round.

Even the simplest American Radiator system today includes surprising new developments that save an enormous amount of work and endless climbing of stairs. You'll have comfort and convenience in your home that you never dreamed were possible!



GOOD AIR CONDITIONING BEGINS WITH

Good Heating

3

AMERICAN RADIATOR HEAT

gives you

Even Warmth in All Rooms

Whether your home is a rambling New England farmhouse, a many-storied castle or a modern six-room dwelling, there need be no hard-to-heat rooms with an American Radiator system.

Find out the joy of having generous radiant heat in every room. Of summer-like warmth in the windiest, coldest weather. Relax or dress in the privacy of your room in the same luxurious comfort that welcomes your guests downstairs. You'll get quick, generous warmth up on the top floor and in rooms that face the north, for wind can't force back radiator heat. The new swift-acting air vents, the special warm water circulators, the adjustable valves that measure heat to your rooms . . . all the wizard-like gadgets in American Radiator systems assure swift, unfailing warmth in the furthest room of the house.

And for *uniform* heat, without any ups and downs, there's nothing to equal the clever new thermostats these systems now boast. Long before you're chilly, the brain of your thermostat can sense the need for warmth, and keeps the temperature right on the comfort line always.

Leave doors between rooms open whenever you like. You'll have uniform comfort throughout . . . the same warm welcome waiting in every room!



GOOD AIR CONDITIONING BEGINS WITH

Good Heating

4

AMERICAN RADIATOR HEAT

includes

Low Cost Hot Water Winter and Summer

All the hot water you want is a special American Radiator feature you'll thoroughly enjoy! Step out of bed in the morning into a good hot shower. Have plenty of hot water ready for quick convenient shaving. After a hard day's work relax in a soothing tub.

Ask any lovely lady and she'll tell you: Hot water is the best beauty treatment that money can buy! Daily baths and showers, hair with the glint that only perfect cleanliness can give, immaculate garments and those fresh white touches that add crisp charm to a costume. All these mean hot water as an American Radiator system can give it—plentiful, automatic, economical and always on tap!

As for household chores, big tubs of hot water make wash-day fly, and dishes almost wash themselves under the hot water faucet.

In many an emergency you'll welcome hot water that's *ready*. For sudden illness, aches and pains, or hot-water-bag comfort at bedtime. And in summer, when you need warm water for refreshing tubs and showers, plenty of clean clothes and easy hot weather work, an American Radiator system can supply it.

In many American Radiator systems an automatic water heater is built right into the house heating boiler, requiring no extra fuel supply—no attention at all. In *any* American Radiator system there's provision for a heater of just the type you want, for hot water at rock bottom cost. You'll save dollars and dollars on fuel costs.



GOOD AIR CONDITIONING BEGINS WITH

Good Heating

5

AMERICAN RADIATOR HEAT

makes your Basement a Place for Play Instead of Work

Make an informal rumpus room in your basement, a fascinating hobby room, gymnasium, marine room or bar. Or just an efficient laundry, so clean, so cheerful that all the drudgery vanishes from washday! A new American Radiator Air Conditioning System, compact and colorful, will give you plenty of space to work the transformation.

Join today's movement to make the basement as important as any other part of the house, with plenty of sunshine and air . . . maybe an entrance on the terrace. Even older basements can be reclaimed with little trouble or expense. Only choose as your first essential an American Radiator Air Conditioning System that takes dirt and work out of the basement . . . gives it a carefree air!

The Ideal Boiler of your American Radiator system can have a sleek steel jacket in glowing red or smart, rich green. Choose one if you wish that completely conceals in a rear cabinet an automatic burner, a domestic water heater and all the accessories. You'll be proud to show your friends one of these cabinet boilers, that marks your home as strictly up to the minute. And its modern appearance is a sign of inward efficiency that's never been equalled before. No matter what fuel you burn—coal, coke, oil or gas—your boiler will be specially designed to burn that fuel with the highest possible economy.

IN ADDITION TO THE BENEFITS OF RADIATOR HEAT . . .

New AMERICAN RADIATOR AIR CONDITIONING SYSTEMS

BRING ALL THE OTHER HEALTH AND COMFORT FACTORS OF . . .

Real Air Conditioning

American Radiator Air Conditioning Systems make the air in your home delightful to live in—clean, fresh, humidified and gently moving—but supply these desirable conditions without sacrificing healthful radiator heat. Every American Radiator Air Conditioning System *begins* with American Radiator heating, to which is now added the Arco Air Conditioner.

The air enters this new machine in your basement heavy with dust and impurities . . . exits to your rooms refreshing as a June day. The atmosphere is transformed! . . . And healthful, sunlike radiant heat completes your home comfort.

Another special feature sets the Arco Air Conditioner above and apart from ordinary air conditioners. It is separate from the heating. You can install an Arco Air Conditioner with the heating system or have your Heating Contractor add it later, without structural changes in the house. You can turn it off without affecting the heat. And in mild weather when your heating plant does not operate continuously or is entirely shut down, the Arco Air Conditioner can function continually if you wish, providing clean fresh air to breathe.



GOOD AIR CONDITIONING BEGINS WITH

Good Heating

6

AMERICAN RADIATOR AIR CONDITIONING SYSTEMS *bring you* PROPER HUMIDITY

by Adding Water to Thirsty Air

When you open a window in winter, it's probably moisture you want. When you start the heat in the fall and hear mysterious creakings, it's the woodwork "drying out." Everything in your house needs humidity.

Because we know that heated air drinks moisture from your body, dries out nose and throat and roughens up your skin, we've made humidity a major benefit of American Radiator Air Conditioning Systems. Your conditioning unit has a drinking fountain for the air that passes through—a spray of clear, fresh water.

The air picks up refreshment and carries it through your house. This normal, healthful humidity does wonders in improving the atmosphere. Indoor plants do well and flowers last for days. Drapes, upholstery and rugs wear better. Pianos stay longer in tune; doors and drawers won't shrink; and books keep their bindings intact. If you have treasured art, humidity is of first importance to guard and lengthen its life.

And *you* yourself. Thousands of people have found that colds are fewer, health better, the air pleasanter to breathe. You'll welcome the new soft quality that melts the harsh dryness right out of the air!



GOOD AIR CONDITIONING BEGINS WITH

Good Heating

7

AMERICAN RADIATOR AIR CONDITIONING SYSTEMS

bring you

CONSTANT CIRCULATION

of Clean, Fresh Air

You needn't go out in winter for a whiff of fresh air! We'll bring you the breath of outdoors right in your own house.

An American Radiator Air Conditioning System is the perfect answer to your ventilation problem. No open windows or drafts on your back. Stuffiness all gone. Clear, fresh, even-tempered air keeping mind and body alert. And when there are fumes or smoking, your American Radiator system can flush out the house, bringing in warm, cleansed air.

Think what this constant, draftless circulation of fresh air can mean to your children! A healthy, oxygen-bearing atmosphere when they can't play out of doors.

What's more, this air enters your rooms clean as a lake breeze. The efficient filtering process of an American Radiator Air Conditioning System strains out the dirt caused by traffic, streets, smokestacks. Less dusting of tables, piano keys and the arms and rungs of chairs. Less vacuuming and mopping. Draperies and decorations will stay fresh longer. You'll find filtered air as good as an extra servant in keeping the house clean.

Clean air helps guard against colds, too, hay fever and other ailments, because unseen impurities are left behind with the dust. People who suffer from pollens have found filtering a wonderful relief.



GOOD AIR CONDITIONING BEGINS WITH

Good Heating

8

AMERICAN RADIATOR AIR CONDITIONING SYSTEMS *can bring you*

COOLNESS IN SUMMER at Reasonable Cost

The air in your home, all through the warm months, can hold coolness refreshing as a sea breeze when it's blazing hot outdoors. Live, work, eat, sleep and entertain your friends all in clean cool comfort.

Choose any one of the very practical cooling methods American Radiator Air Conditioning Systems can offer. You can have an attic fan that works at night, pumping out the thick blanket of stifling heated air . . . drawing cool, nature-conditioned night air up through your house.

You'll have deep refreshing slumber in spite of sweltering nights; coolness stored up as a welcome refuge from the heat of the day.

Perhaps you'll prefer to have a special section added to your winter air conditioner, that removes heat and stickiness from the air in summer by means of a coil through which cold water or a refrigerant is circulating.

Cooling has become an inexpensive luxury thousands of homes can afford. And once your house is invitingly cool in summer, you will wonder how you went so long without this wonderful comfort.

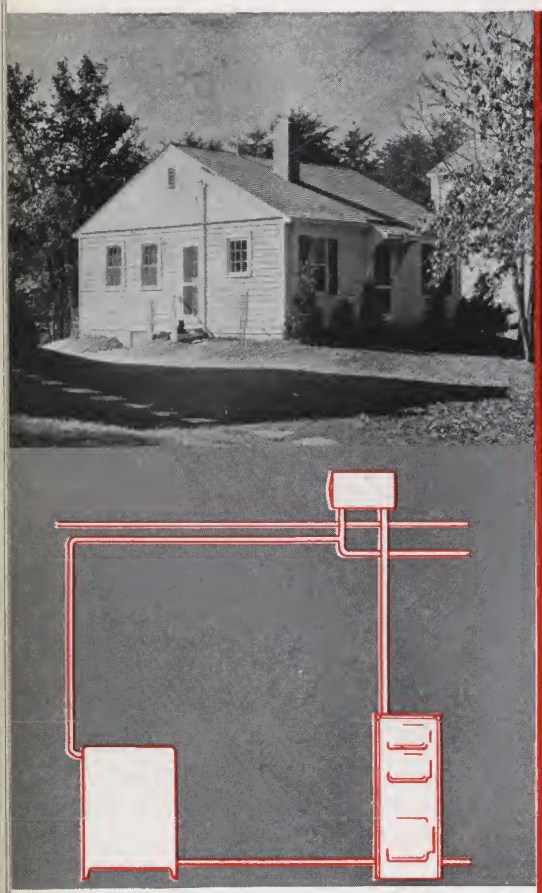
Perfect indoor weather twelve months of the year with American Radiator Air Conditioning! And remember this: You can if you like begin with radiator heat . . . add air conditioning later when you're ready. Practical, economical, and the most convenient way to have year-round modern air conditioned comfort in your home.

There is an

AMERICAN RADIATOR HEATING

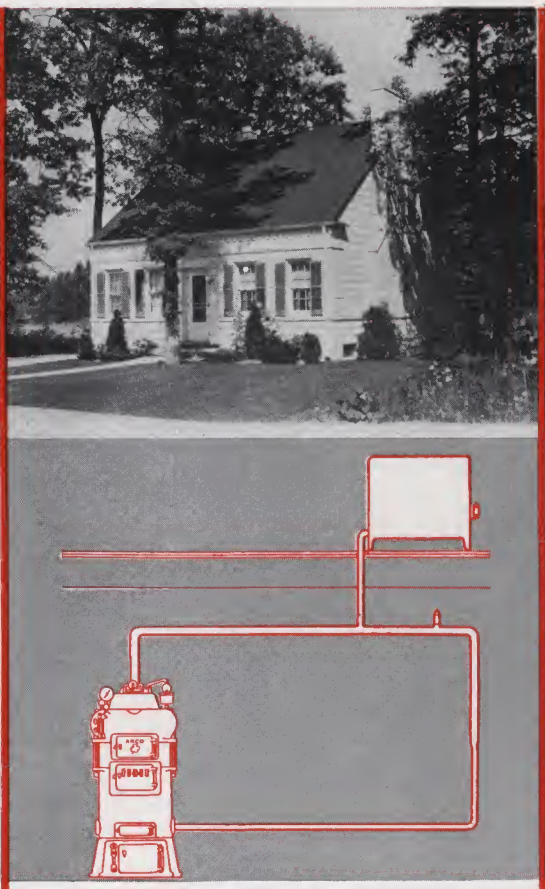
and AIR CONDITIONING SYSTEM

FOR EVERY TYPE OF



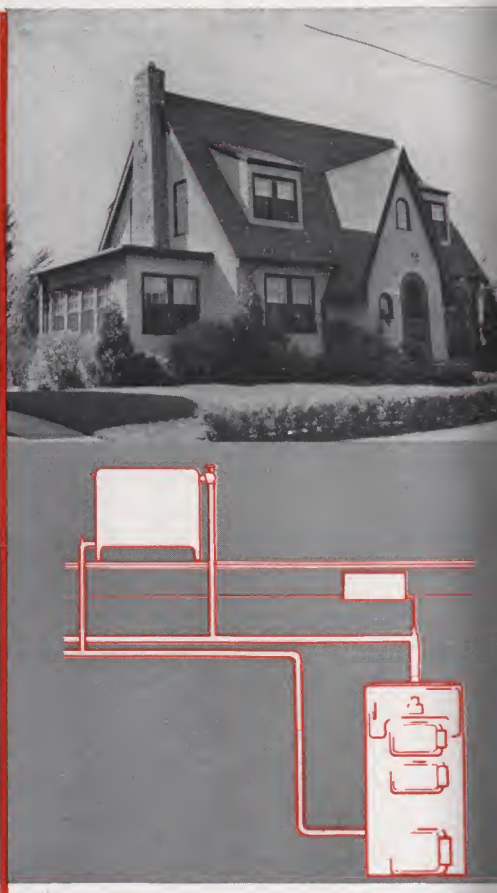
A $2,500 HOME

If your problem is to provide luxurious warmth for a small home at rock bottom cost, this warm water radiator heating system is for you. The Ideal Arcola in its attractive jacket can be installed in living room or kitchen where it circulates warmth through its perforated top. The piping is small and neat. Slim modern radiators are used in all rooms. Also insulated and unjacketed models.



A $4,500 HOME

One-pipe steam is the least expensive radiator system, and an Arcorad Heating System for steam has this added advantage: It comes complete in a "package." Includes boiler, radiators for all rooms, genuine Arco Copper Pipe and Fittings, and accessories. Completely coordinated, all parts are designed to work together efficiently to produce economical, dependable heat.

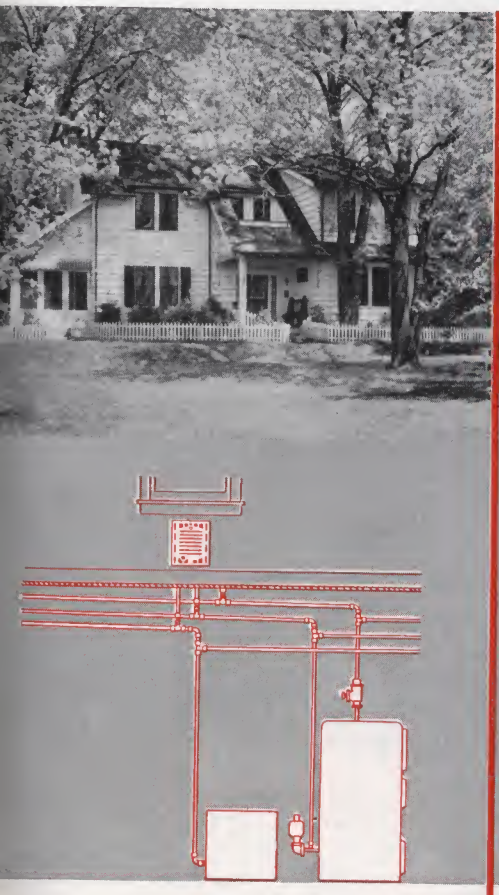


A $10,000 HOME

An automatic coal fired warm water heating system. While slightly higher in cost than one pipe steam, the delightfully mild, even warmth maintained by the constant circulation of warm water through the radiators, is a decidedly worthwhile benefit. Stoker feeds fuel to fire. Uniform heating throughout house assured by "balancing" return elbows on the radiators.

Whether your house costs $2,500 or $50,000 you can easily have the luxury, the protection, the genuine satisfaction of American Radiator comfort! American Radiator Company makes modern, skilfully designed heating boilers, radiators and control devices in many types, at prices to suit every income. On these pages we have illustrated six typical systems suited to homes in six price ranges. Study the one that most closely approximates your own requirements. On pages 16 to 23 you will find all the products that go to make up that system, and many alternate products from which to choose. These pages will be your best guide in obtaining for your home exactly the comfort and convenience you want.

HOME . . . IN EVERY PRICE RANGE



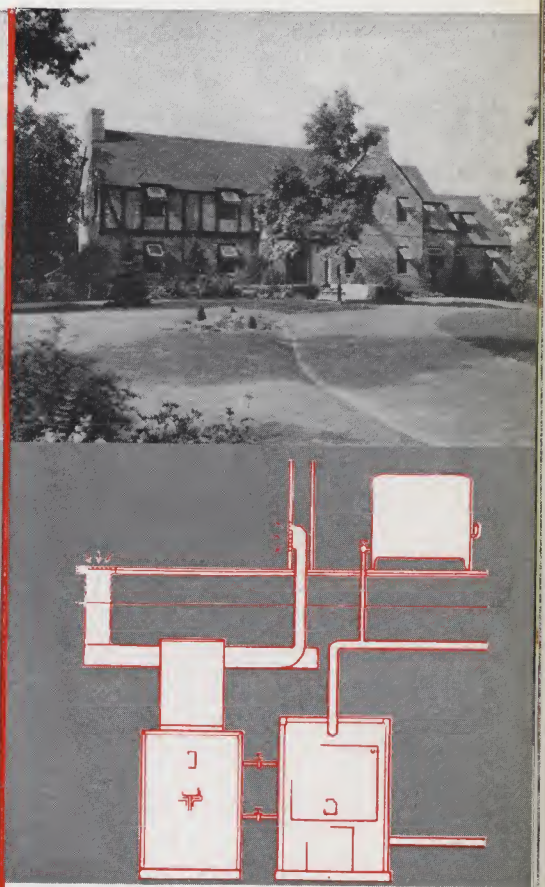
A $15,000 HOME

The Arco Thermo System is an automatic forced circulation warm water heating system, but employs recessed Arco Thermo Units concealed by grilles instead of conventional radiators. Within the unit a silent, air-driven fan blows across a copper radiator, producing a positive circulation of warmed air through the room warming it comfortably in from three to six minutes.



A $25,000 HOME

This warm water air conditioning system includes a motorized pump which speeds the circulaton of water to provide quicker heating. Adjustable "balancing" elbows on all radiators insure even heat. Designed for automatic firing and year-round domestic hot water. An Arco Air Conditioner, operating automatically, humidifies, cleanses, circulates and ventilates the air.



A $50,000 HOME

An automatic oil-fired split system ideal for large residences where conditioned air may be supplied in the master's quarters while radiators are used for heating the servants' wing. Here are all the advantages of quick, mild, boiler-produced heat combined with the finest winter air conditioning and year-round domestic hot water. Cooling can be added.



A NEW KIND

ARCO

SPECIAL FEATURES

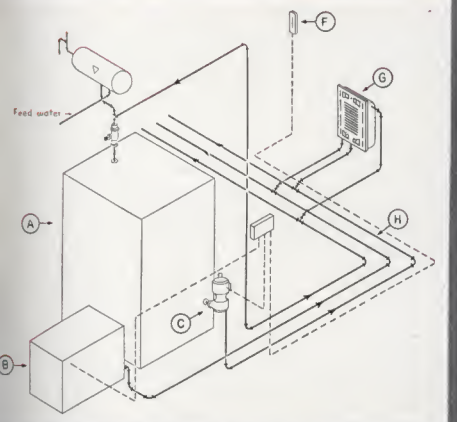
1. AIR CIRCULATION in every room—but no air recirculated from room to room.
2. NEEDS NO DUCTS—No headroom sacrificed in basement — no jogs in walls — no cut-up closets.
3. SAVES FLOOR SPACE—Thermo Units are mounted within and flush with wall, under windows or elsewhere. Attractive outlet grilles can be painted to match any color scheme.
4. INSTANTANEOUS HEAT — There's no lag between thermostat's call and heat delivery.
5. ELIMINATES "COLD 70"—Keeps floor and ceiling temperatures from varying more than 3 degrees.
6. COMPLETELY AUTOMATIC OPERATION — No work, no worry, no trouble. Set the thermostat, and that's all.
7. PROVIDES DOMESTIC HOT WATER — An indirect heater, an integral part of the No. 7 Boiler supplies ample domestic hot water for every need, all year 'round.
8. ALL COPPER PIPING—Protects against corrosion, cannot rust.
9. EASILY INSTALLED in old homes as well as new—requires no structural changes in house.

PAT. NOS. 1,926,527 · 1,926,528 · 2,038,347 & 2,013,087 OTHERS PENDING
ARCO
=THERMO=
SYSTEM
AMERICAN RADIATOR CO.
NEW YORK CITY

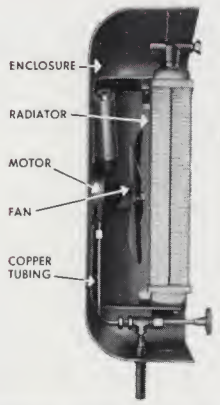
OF HEATING YOU'VE NEVER SEEN BEFORE

THERMO SYSTEM

Tomorrow's Heating for your Home of Today



Water in the boiler (A) is maintained between 180° and 190° by temperature control switch operating automatic firing device. Thermostat (F) operates Warm Water Circulator (C) and Air Supply Unit (B), starting them simultaneously. Small diameter copper tubing (H) carries warm water to radiator and air to fan motor, both in Arco Thermo Unit (G).



This cut away view of thermo unit shows how positive air circulation is provided. The unit itself is recessed in the wall. The fan, driven by compressed air, blows across the warm water copper radiator. These units warm a room in 3 to 6 minutes, keep the air moving, eliminate stratification and maintain temperature with but 3 degrees difference between floor and ceiling.



Here is a heating system so different, so obviously sound and yet so simple you'll wonder why it wasn't thought of before.

Based on the tried and proved principles of forced warm water heating, the Arco Thermo System uses a new method to distribute heat in each room. Arco Thermo Units, recessed in the walls and concealed by attractive grilles, replace conventional radiators. Within the Unit a small, silent fan blows across a copper warm water radiator, creating a positive circulation of warm air throughout the room.

The Arco Thermo System provides amazingly fast, low-cost heat. It uses only one-third as much water as the average warm water system, and a new fast-acting thermostat relays instantaneous calls for heat. In just 3 to 6 minutes the room is comfortably warm! Floor and ceiling temperatures do not vary more than three degrees. Every room has desirable air circulation, but all ductwork is eliminated.

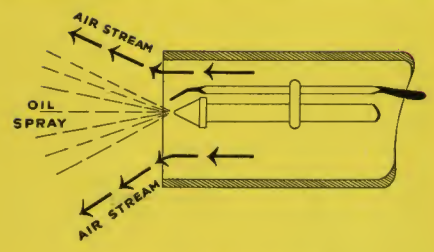
The Arco Thermo System comes complete. It includes an Ideal Boiler; complete Thermo Units for every room, including grilles; Arco Full Flow Wrought Copper Fittings and Pipe; Warm Water Circulator; Air Supply Unit; new fast-acting Thermostat—in fact everything. A heater for year-round hot water can be included. Your Heating Contractor can give you all the facts and prices on the new Arco Thermo System.

Designed for your home in the world's greatest heating laboratory

THE NEW IDEAL

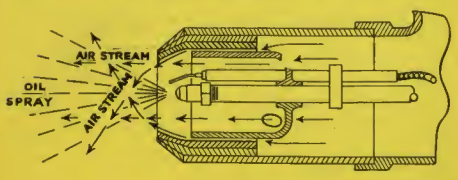
ARCOFLAME

HEATING UNITS AND OIL BURNER



ORDINARY OIL BURNER

Air is forced through straight air tube to meet atomized oil. Inadequate mixture of air and oil produces smoky and inefficient flame. Excess air can clean the flame, but it further reduces efficiency and consumes more oil.



ARCOFLAME OIL BURNER

Air is forced through the special TURBOMETER, which directs the air stream through and around the atomized oil, resulting in a perfect mixture and a clean hot flame without excess air. Reduces fuel consumption and cuts cost.

TURBOMETER

measures and spins the air . . . gives the clean flame that saves money.

ARCOFLAME OIL BURNER MODEL B1 FOR CONVERSION

Pressure type.

Designed in American Radiator's Institute of Thermal Research.

Unique TURBOMETER gives substantial fuel savings.

Capacity 1 to 2½ gallons of oil per hour —conservatively rated.

Burns low-priced No. 2 or No. 3 oil.

Silent and vibration-free.

Practically no servicing required.

Compactly designed for limited space or rear installation.

Arco green and black finish.

Complete controls furnished, including room thermostat.

You can rest with confidence on your decision to install an Ideal Arcoflame Heating Unit or Conversion Oil Burner.

Developed in American Radiator's famous Institute of Thermal Research, the Arcoflame Oil Burner incorporates unique features and improvements that mean more efficiency, lower operating costs, longer life.

Thanks to the special Air Guide and to the *Turbometer,* the Arcoflame actually produces a clean, soot-free flame with higher efficiency than experts hitherto thought possible. This results in real economy of operation, which is especially evident in the No. 7 and No. 11 Heating Units. Here the flame and burner characteristics have been exactly matched to firebox and heat transfer surface.

The Arcoflame is silent and vibration-free in operation. The special flexible coupling which joins the motor to the fan and oil pump eliminates "bump" and shock when the motor starts or stops. The Arcoflame is non-radio-interfering. You'll hardly be conscious of its presence except for the real comfort and economy it will bring you and your family.

Every Arcoflame Heating Unit and Oil Burner is rigorously tested at the factory. You will get perfect service from the start. For conversion, the new Arcoflame Oil Burner is available in models to fit any boiler or furnace already installed. Each burner comes complete with all controls and room thermostat.

Arcoflame Heating Units and Oil Burners* are covered by the American Radiator guarantee. Your dealer can arrange a service contract for periodic inspection.

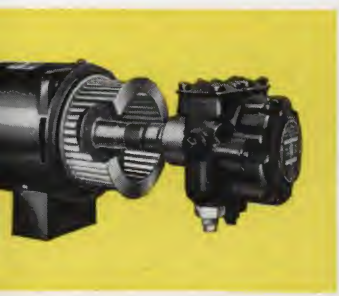
** Now available in certain territories. Distribution will be extended.*



IDEAL ARCOFLAME HEATING UNITS

No. 11—Automatic oil burning heat and all year 'round hot water. Deluxe in performance and appearance. Finned flues, triple insulation and air-tight construction. Unusual economy. Draft Stabilizer assures constant, unvarying draft.

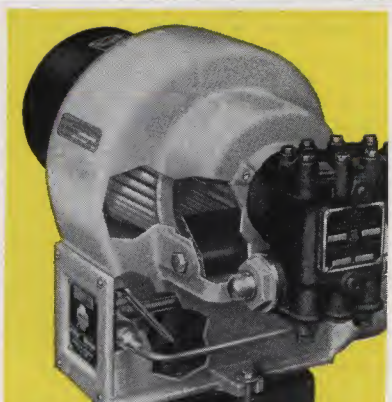
No. 7—Oil heat plus built-in all year 'round hot water supply at budget cost. Scientifically designed gas passages, correctly shaped combustion space, air-tight construction and heavy asbestos insulation. Draft Stabilizer furnished with unit.



NO BELTS — NO HUM. Single shaft for pump, fan and motor with a special flexible coupling means quiet operation, quick dis-assembly for service and exact alignment always. Smooth running Sirocco-type fan is balanced dynamically and statically for long life and silence. Oversize motor means longer life, reserve power, trouble-free dependability and minimum current consumption. Quiet and vibration free. Protected against overload by automatic shut-off.



WATERPROOF CAST IRON BASE in Conversion Model protects transformer against damage. Mounted on sound-insulating material, it steps the spark to 10,000 volts. Mid-point grounded, non-radio-interfering. Built for constant service, but operates only intermittently—another assurance of long life.



STREAMLINED AIR SUPPLY. Air Guide (fastened on oil tube) leads air smoothly to the TURBOMETER, eliminates back-currents and air-slap; exclusive with Arcoflame! Rigid alignment of heavy steel oil tube holds nozzle and electrodes always in dead center. Adjustable damper provides primary air control.



CLEAN OIL under exact pressure — and no dribble when burner stops. Duplex Oil Control assures a quiet, even flame with no smell, no smoke from smoldering oil, no wasted fuel. Oil is filtered twice: by Monel metal strainer at the pump and by the strainer in the nozzle. Both are easily cleaned.

ARCORAD

LOW-COST HEATING SYSTEMS IN PACKAGES FOR SMALL HOMES

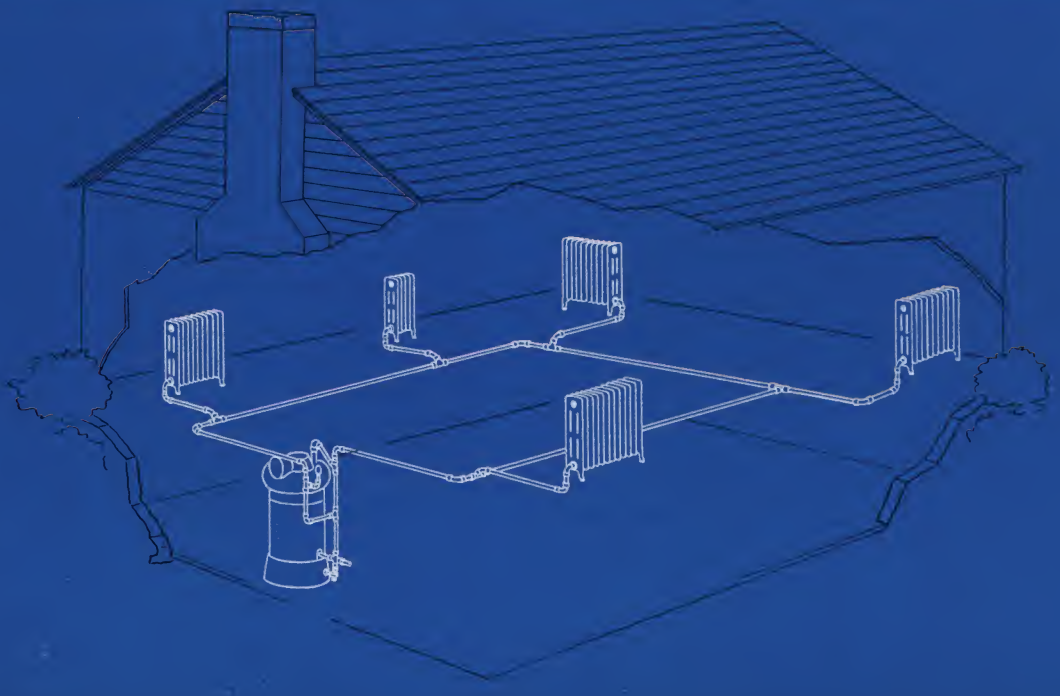


Arcorad Heating Systems have three distinct advantages: First, they offer you the world's finest heating —Radiator Heating—at remarkably little cost. Second, they are completely coordinated systems; Boiler, radiators, piping—everything is designed to work together harmoniously, efficiently. Third, their quality is certified by the name American Radiator—the most famous name in heating for half a century.

Arcorad Heating Systems are perfect for bungalows, small two-story homes, farms—in fact any moderate sized dwelling, store or other building.

The modern Corto Radiators in every room provide cozy warmth with both radiant and convected heat. The famous Arco Round Boiler uses a minimum of fuel, and takes little space in the basement. Arco Full Flow Wrought Copper Fittings and Arco Copper Pipe are the world's best. They resist corrosion—cannot leak —will give years and years of efficient service.

For real comfort in small homes there is nothing comparable to an Arcorad Heating System in the low-priced field! Ask your Heating Contractor about Arcorad, the genuine American Radiator Heating System in a "package."



ARCO COOLING FAN

SUMMER COMFORT FOR AS LITTLE AS 6¢ A NIGHT

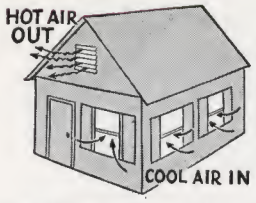




Diagram drawing shows how Arco Cooling Fan operates. Cool night air is drawn in through windows, circulated through house, then blown out into night.



Automatic control. Auto-Timer starts or stops Arco Cooling Fan any time.



The new Arco Cooling Fan is the ideal answer to the plea for a truly low-cost method of summer cooling. According to laboratory tests and homeowners' reports the Arco Cooling Fan costs as little as 6c a night to operate—monthly, less than it costs to run an electric refrigerator.

The Arco Cooling Fan floods your home with nature-cooled air. Mounted in the attic, the fan is put in operation about an hour after sundown. Through a grille in the attic floor or an open door, the fan starts drawing hot air from the house and blowing it out into the night. In a short time the attic and every room have been drained of hot, stuffy daytime air, while through open windows downstairs, cool night air is drawn into the house and circulated through every room.

Soothed by a gentle, fresh breeze, you sleep, work or play in cool comfort. Smoke and stuffiness are absent from parties when the Arco Cooling Fan is in operation.

If you close the windows next morning before the heat of the day sets in, your home will stay cool and comfortable for many hours.

A device called the Auto-Timer automatically starts the Arco Cooling Fan before you return home, or stops it after you've gone to bed.

The Arco Cooling Fan is available through your local Heating Contractor in sizes to meet the requirements of all small and average size homes. Its cost is as low as $88.00, plus a small installation charge, and its operating expense practically negligible.

AMERICAN RADIATOR HEATING
or AIR CONDITIONING SYSTEMS

OFFER YOU THE WIDEST VARIETY OF HEATING AND AIR-CONDITIONING PRODUCTS TO TAILOR YOUR SYSTEM TO YOUR PERSONAL NEEDS . . .

THESE PRODUCTS DESIGNED TO BE PART OF AMERICAN RADIATOR HEATING OR CONDITIONING SYSTEMS



ARCO RADIANT CONVECTOR — Gives healthful radiant heat plus warmed air. Concealed.



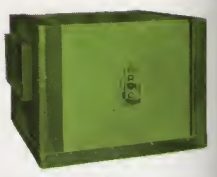
ARCO — The *little* radiator that gives more heat.



CORTO — The classic slim-tube space-saving radiator.



ARCO CONVECTOR—An attractive modern radiator for complete concealment.



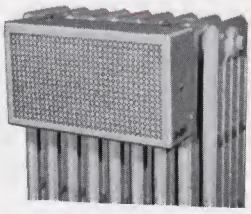
ARCO COOLING UNIT—May be added to Arco Air Conditioner for cold water cooling in summer.



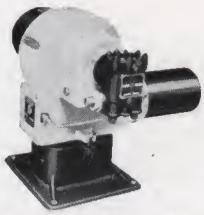
ARCO HUMIDIFIER — An accessory for use on steam or warm water heating systems.



ARCO THERMO HUMIDIFIER—A low-cost practical humidifying device that can be installed in basement or closet.



ARCO RADIATOR BOOSTER —Makes radiators give more and quicker heat.



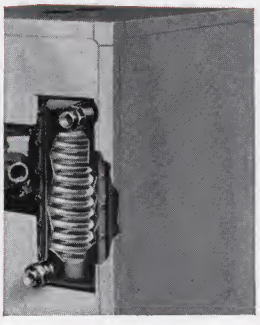
ARCOFLAME OIL BURNER—The acme of economy and service.



ARCO EQUATROL — A thermostat for steam heating systems that maintains unusually uniform temperature.



EXCELSO INDIRECT WATER HEATER — For abundant hot water. To be used in conjunction with house heating boiler.



BUILT-IN WATER HEATER — Uses automatic house-heating boiler to heat domestic water. Gives year-round hot water when summer-winter hookup is installed.



SCUTTLE-A-DAY—Coal-burning water heater that gives abundant domestic hot water for a few cents a day.



ARCOLOY TANK—Hot water storage tank of new corrosion-resisting copper alloy for domestic water heating systems. Twenty-year guarantee.



IDEAL BOILER No. 7—New universal boiler. Unusually high efficiency with hand-fired coal, oil, stoker or gas.



IDEAL OIL BOILER No. 11—For small homes. Low cost, automatic, especially designed to get maximum heat from oil.



IDEAL OIL BOILER No. 12—For larger homes. De luxe, automatic, has construction features to make oil burning economical.



IDEAL BOILER No. 21 — The boiler for automatic coal-firing, with any standard hopper or bin-feed stoker.



IDEAL BOILER No. 92 — Beautiful specially designed oil boiler for larger homes or small buildings.



IDEAL WATER TUBE BOILER —For large homes or smaller apartment buildings. Quick, economical heating with coal or oil.



IDEAL REDFLASH BOILER— Probably America's best known boiler. Has consistently delivered superior heating comfort with all fuels.



NEW ARCO ROUND BOILER —Known for dependability and economy, especially with hand-fired coal. Has a decorative jacket.



IDEAL ARCOLA — Doesn't need a basement to give clean, dependable warm water radiator heat. Coal or oil.



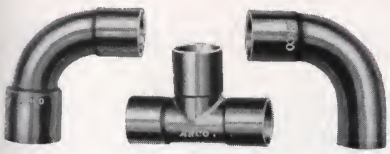
ARCO AIR CONDITIONER No. 101-B—Automatically circulates humidified, filtered, fresh air through small homes. No. 201-B has greater capacity.



ARCO AIR CONDITIONER No. 301-B — In conjunction with boiler heats and conditions air for principal rooms of larger homes. Other rooms can be heated by radiators.



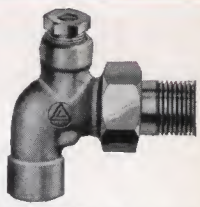
ARCO AIR CONDITIONER No. 1101-B—For "split" systems. Houses boiler, air conditioner and automatic domestic water heater.



ARCO COPPER FULL-FLOW FITTINGS — Sweat fittings that cannot leak or break.



ARCO COPPER PIPE — Long-lasting, corrosion-resisting, trim and smaller in size than ordinary pipe. Very moderate cost.



No. 233 BALANCING ELBOW —Increases or restricts flow of warm water to individual radiators to balance circulation throughout system.



lo. 999 PACKLESS RADIA-OR VALVE—A better valve, hat never needs repacking, or steam or forced circula-ion warm water systems.



No. 900 PACKLESS ADJUSTABLE ORIFICE RADIATOR VALVE—May be set to admit steam to radiator at exact rate required for a perfectly balanced system.



No. 300 ARCO-DETROIT MULTIPORT AIR VALVE — Automatic Modulator varies opening according to steam pressure, permitting quick, uniform venting of all radiators.



No. 861 ARCO-DETROIT HURIVENT — Vents steam mains with utmost speed. Full half-inch venting port. No. 862 for Vacuum Systems.



No. 5000 IDEAL VARIPORT AIR VALVE—Varies venting rate to balance system. Assures uniform heating in all rooms.

ARCO AIR CONDITIONING PRAISED EVERYWHERE



"The Arco Air Conditioning System has given the best of satisfaction. At a party with twenty people smoking in one room, no smoke odor was noticeable. There was practically no dust. The moisture content enables us to run a very comfortable temperature of 60° instead of 70°. This means a saving in fuel."

GEO. G. MILNE, Lincoln Avenue, Port Chester, N. Y.



"I have tremendously improved my radiator heating with the introduction of humidification and fresh, clean, circulating air. . . . I am delighted that I have had this winter's experience in my own home. You are certainly making it possible for home owners to have a complete air conditioning system."

R. W. LINNEMEYER, 318 Arbon Lane, Webster, Mo.

Thousands of letters say, "Cleaner, more comfortable"



"Your Air Conditioner gives us the right amount of humidity, keeping our house clean and comfortable. I give the Air Conditioner credit for keeping Mrs. Day and myself free from colds and sinus trouble."

GEO. M. DAY, 2630 Benjamin St., N. E., Minneapolis, Minn.



"The American Radiator Conditioning System which I installed last year has given excellent satisfaction. Dust has been materially reduced, humidity has been maintained as desired, and comfortable temperatures have prevailed at all times. . . . I am heartily in favor of your equipment and system."

A. ARNOSTI, 819 E. Beaumont Ave., Whitefish Bay, Wis.

"A great saving in fuel . . . and more healthful . . ."



"We installed an American Radiator Conditioning System last fall and it has proved very satisfactory, giving us cleaned and humidified air, perfect heating and ample hot water for domestic use the year round. . . . We are very well pleased with the system."

M. F. HANSON, Detroit Lakes, Minn.



"I have been in the building field thirteen years. The new American Radiator Conditioning System is by far the most satisfactory. . . . When temperature dropped to 6 or 7 degrees below zero, we didn't know it was cold until we went outside. Yet, it is most economical."

JULIUS NACHMAN, Builder, 4734 Leslie Ave., Detroit, Mich.

"Dust materially reduced for better cleanliness . . ."

"Proper humidity and air circulation maintained . . ."



"My Arco Conditioner is a valuable addition to my American Radiator heating system. Fresh air, and humidity can be added to the dry winter air, this with the circulation and cleaning gives one about all they could ask for in proper winter air conditioning."

D. G. GRIGSBY, 1917 Tuscarawas, West Canton, Ohio



"We are glad that we have our Arco Air Conditioner. It keeps the air moving, and does a good job of circulating the heat. The moisture supplied to the air adds to the comfort of radiator heat. . . . We have a cleaner, more comfortable and a more healthful home."

MRS. GEO. E. ARMINGTON,
554 Greenvale Drive, Cleveland Heights, Ohio

"Smoke and staleness drawn from the rooms . . ."



"The past winter proved the worth of your new American Radiator Conditioning System. . . . My new home had sufficient humidity and a constant supply of clean filtered and heated fresh air. At 22° below zero, my home was as comfortable as any day in the spring."

FRED S. SIDLES, 1312 Fall Creek Road, Lincoln, Nebraska



"We are pleased that the Arco Air Conditioning System installed in our new home has fulfilled all your claims. We are satisfied that we made the right choice. . . . With 36 consecutive days below zero last winter we enjoyed perfect comfort throughout the house."

DR. G. A. HAGBERG, 4410 Sunnyside Rd., Minneapolis, Minn.

"Kept us free from colds and sinus trouble . . ."



"All smoke, dust and staleness are gently drawn from the rooms providing an atmosphere that is most pleasant at all times, and I must say this system has been very satisfactory in every respect."

JOHN J. HAYES, 2218 Sheridan Ave., So., Minneapolis, Minn.



"The boiler generates steam quickly and provides ample domestic hot water at all times. . . . The air conditioner, which was installed for winter conditioning, has more than met expectations. In hot weather it produces an appreciable sense of cooling. It is quiet and cannot be heard outside of the boiler room."

A. W. SHEPHERD, 15 Fairview Terrace, Maplewood, N. J.

"At 22 below zero, comfortable as a day in Spring"

WHAT TO DO TO GET AN

AMERICAN RADIATOR HEATING

or AIR CONDITIONING SYSTEM

if you build Take this book to your building contractor and with him check over the systems on pages 14 and 15. Decide which type of system applies to your need. Then, with this system in mind, go over with your builder the equipment on pages 16 to 23. Decide which boiler, radiators, air conditioning equipment, domestic hot water supply and automatic controls should be included. Ask the builder to give your list to a contractor who installs American Radiator Heating and Air Conditioning Systems for an estimate.

if you buy If the house is not yet completed, ask the builder which of the systems on pages 14 and 15 is closest to what he plans to provide. If you wish a more complete system than the builder plans, show him on pages 16 to 23 what you want. It costs less to have extra advantages included during construction than to add them later. If the house is completed, arrange with the builder to install any additional parts before you purchase as this cost will amount to very little extra on each payment.

if you modernize Compare your present system with those described on pages 14 and 15. Do you have economical automatic heat? Hot water in summer? Quick heat in every room? Comfortable humidity in winter? Check your system carefully against what you *can* have today. Then decide what improvements you would like to make, and consult pages 16 to 23 to find out what new equipment you will need. Ask your local American Radiator Contractor for an estimated price on this modernization.

EASY PAYMENTS

Your Heating Contractor can easily arrange with American Radiator Company to provide time payment financing for the heating or air conditioning system to be installed in your present home. There is no red tape. No co-signers. All details can be arranged right in your own home. The low terms make it easy to install a complete radiator heating or air conditioning system at once, and enable you to pay out of income while you enjoy it. This is the sensible, modern way to have the things you want for your home, without waiting too long to get them.



WHEN IN NEW YORK

Visit the world's largest showroom of heating and air conditioning equipment. In our black and gold tower on Fortieth Street, New York, a total space of 30,000 square feet is devoted to a permanent exhibit of new developments in the home comfort field. Here amazing progress in the science of comfort-making is visualized and explained.

Don't miss this vast display, which resembles a museum of science more than a showroom of industry and will give you some idea of *what has happened to heating* — what you can expect today in any home you own, build or buy.

AMERICAN RADIATOR COMPANY

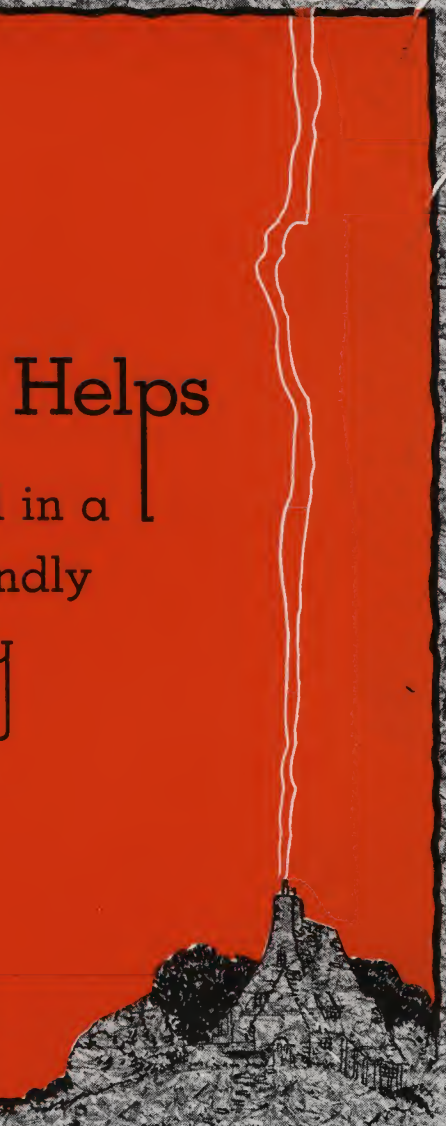
DIVISION OF AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

40 WEST 40th STREET, NEW YORK, N. Y.

Form No. 500 (Rev.)—50M—7/38—C-R

Burnham Home Heating Helps

told in a friendly way



Burnham Boiler Corporation

IRVINGTON, NEW YORK



How much do you care for your children? Do you care enough to make sure that the floor is sufficiently warm so that they can at any time play around on it? If you do care that much, then the friendly suggestions that follow will mean a lot to you.

The friendly way we will help you with your Heating

IN THE FIRST PLACE, let's forget all technical talk. Let's have no discussions about "impinging fire surfaces" and all that sort of silly lingo.

Let's just sort of sit down together, as you would with one of your neighbors who dropped in for an evening, and chat as you then would if the talk turned to heating.

When you consider that for a large portion of the year, so much of your home's comfort depends on the heating, its importance among *first* considerations is obvious. Yet so many actually leave it until the *last*.

You may get accustomed to the shortcomings of ineffective heating, but your friends and guests don't. You may get over grouching about your fuel bill, but the cause is there just the same.

It is, year after year, costing you more than it need. You are actually spending a certain amount of your money for which you get no returns. Which wouldn't you say, is the same as throwing it away?

So don't compromise with your heating. Skimp other places if you must, but have your heating right, so you can have both contentment of mind and comfort of body.

You will find this catalog a friendly help. Anything not covered that you want to know about, don't hesitate to write us. You will get a prompt answer. Furthermore you will find us friendly, pleasant people. A point you will appreciate.

IIIIII-36

Some friendly suggestions as to ways of keeping down Heating Costs

ALLOW US TO SAY AT THE START, that merely keeping down the *cost of your heating* does not mean you are *keeping down heating costs.*

Let us explain. The cost of your heating is what the outfit costs complete to put in. The heating cost, is what it cost to put in, *plus* what it keeps on costing, day after day *to run it.*

Here is how it works. Generally speaking the cost of the heating averages 9½ percent of the total cost of your home.

If, however, to save a few dollars at the start, you skimp a bit here and there on size of your radiators; or allow yourself to be convinced that a smaller boiler will do the work, than the figures show is needed, your heating costs are always going to be too high.

Not only too high, but you won't get the heat comfort you want and have a right to have. It means forever forcing and pushing the boiler. When you do that, an excessive amount of heat is sent up the chimney instead of into your radiators.

Even if that heat didn't go up the chimney, a radiator of a certain size can do only so much heating in a given time. You can't get a quart out of a pint bottle. So it all means you must not only run your boiler harder, but keep it burning full blast longer.

You may save a few first dollars in consenting to skimp your radiation or your boiler, but you will pay for that saving over and over, by the extra fuel you must burn, and still not have the cosy comfort heat you have a right to have. Such crowding of your boiler also shortens its life.

So save your money and insure your contentment by having plenty of radiation and an ample size boiler. Don't let anybody talk you out of it. Be firm on that.



It's funny the way some men have of blaming their wives for what they are to blame themselves. They will insist on having all the say about selecting the heating, and then grouch to her if it isn't satisfactory.

Now let's get Systems Out of our System

TALK TO MOST OF YOUR FRIENDS about how best to heat your house and what happens? Some will mention this or that system. Others dwell on the fuel and talk the advantages of oil over coal, and gas over oil. The next one you ask is "all het up" on the advantages of having a stoker and using cheap fuel. And so it goes.

A surprising few seem to consider of much importance what goes to make up one system, or another. Or the best boiler for your particular needs.

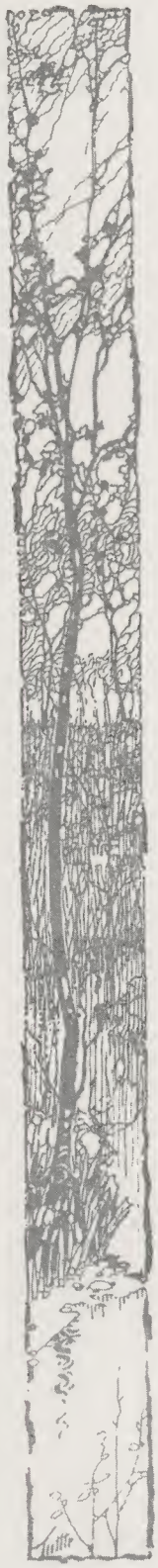
Of first importance to you, is what kind of an outfit is best adapted to your needs and pocketbook. It is both the starting and the stopping point so far as you are concerned.

Of course, for one reason or another, you may prefer steam over hot water. But what you may like, doesn't prove it is the best for your home, all things considered.

In any event, the heart of any heating system; and the efficiency of burning any fuel, *largely lies with the boiler.* Therefore, start right, right at the start, with the right boiler.

Naturally every boiler maker claims his is the best. But it is just common sense that all of them can't be best. Some one of them, however, is the best one for your needs and pocketbook.

We believe it is a Burnham. We know there is a Burnham for every need and pocketbook, and we know how effectively Burnhams give you cosy comfort heat. We have been making Burnhams for over 60 years.



Then let's Systematically look into the Systems

THERE ARE FOUR MAIN SYSTEMS, the heart of which is a boiler. Let's look into the points of each and see if we can't help you to make a selection of the one system best adapted to your particular needs and pocketbook.

1. STEAM

Lowest in cost of installation. Quick to respond. Quick to heat. Costs less than water because of one line, instead of two, of pipe. Because of high temperature of steam, radiators can be smaller.



Its limitations are, that unless you have it equipped with the right kind of venting valves on the mains and radiators, you won't get a bit of heat until the water is at boiling point and steam pressure is produced. Below that point you burn fuel without any return.

That's why so many steam heated homes, become so quickly chilly when the drafts are shut off.

2. VAPOR-STEAM COMBINATION

By this combination, we mean a one pipe steam system, the mains and radiators of which are fully equipped with automatic air venting valves. Not the usual kind, but Burnham's that not only let the air *out,* but *prevent its returning.*

That means, the air pressure in the system will be so reduced, that the boiling point of the water is lowered, and the hot vapor will circulate freely before there is any actual steam.

You get heat several degrees before the boiling point is reached. With but a moderate fire, radiators will keep continuously hot.

These let-out-keep-out air valves, do cost a bit, but will pay for themselves the first season in actual fuel saved. They are sure enough your thrift friends.

3. VACUUM

This is sort of a glorified steam system, having both flow and return pipes, as with your hot water. It is equipped with special air venting valves, which preserve a partial vacuum in the entire system. Sometimes on the larger installations vacuum pumps are used.

The boiling point of the water, because of the reduced air pressure, is greatly lowered, and the hot vapor circulates unhindered. Each radiator is equipped with a swing handle valve, giving a graduated control of the heat. Also a steam trap to keep heat in the radiators.

Its cost is higher than the other systems, but the convenience of control, comfort assured, and fuel saved, warrant it.

4. WATER

The minute there is any heat in the water, that minute it starts circulating, and you get heat from the radiators. It is delightful low temperature heat.

The ordinary hot water system is a bit slow to respond. But that can be successfully overcome by use of a noiseless, electric pump which speeds up the circulation, making hot water heat practically as flexible as steam. Because of the water averaging not above 180 degrees, the radiators must be larger to give an equivalent heating surface to steam at 212.

Each radiator has two pipes—one to bring the hot water from the boiler to the radiators; the other to take the cooled water back.

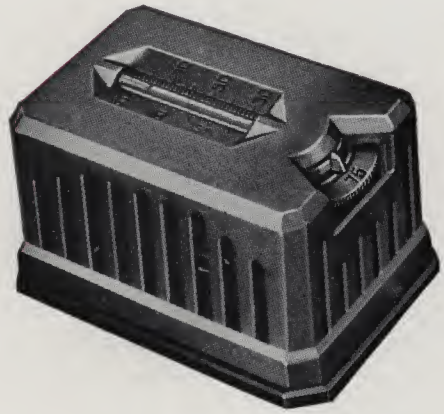
It is a particularly pleasant, low fuel cost system.

Of course, there are some modifications of these four major systems. But in the main these are the facts.

At this point

Consider Automatic Heat

. . . It's so well worth considering



This is the thermostat. You set it at whatever temperature you want, and it does the rest. Does it day and night. Just set it, and forget it. But it never will forget. Never goes to sleep.

IF FOR NO OTHER REASON, than making sure of contentment of mind and comfort of body, automatic heat is worth its price to you.

It certainly does effectually take the fuss and cuss out of heating your home.

Perhaps a better name for it might be "Magic Heat", for it is almost uncanny the way an innocent little box affair called a thermostat, conveniently located on the wall of a first floor room, can take the whole bother of heat watching off your hands.

You set it at the temperature you want, and it does the rest.

Automatic heat is a positive success with gas, oil, or stoker-fired coal. It costs no more in the end than other heats, that do so much less for you. Costs no more, because you get so much more 24-hours-a-day comfort out of it.

Gas is the most completely automatic of all, because after the supply pipe is connected, you give it no further thought.

With oil, all you need do, is remember to keep an eye on the fuel supply and see that the tank is kept filled.

In some sections, by using a stoker, you can save considerable on your fuel costs, as it will burn a low cost coal.

As far as we are concerned, Burnham make separate types of boilers, each designed to best burn any of the three fuels.

So again it simmers down, to selecting the fuel and the Burnham which best meets your particular needs and pocketbook.

But if you can, by all means put in some one of the three automatic heats. You can then be assured of absolute contentment of mind and comfort of body.

Now let us look into The Fuels that are the best for you

GAS

Gas is the more fully automatic of all fuels. No bin or tank to fill. No ashes. No odors. Where natural gas is available and in many localities where there is a low gas rate for heating, the cost is not at all excessive. After the pipes are connected you can forget everything. The thermostat and other automatic devices do the rest.

OIL

So far as convenience and freedom from all care is concerned, oil comes next to gas for automatic heating. All you need to remember, is to keep an eye on the oil supply. Even that, in some localities, is taken care of by the oil concerns. All standard makes of oil burners are now so highly perfected, you can't go wrong on oil heat. But it is important to have the right boiler. We have a catalog devoted especially to that matter. Send for it.

COAL

In some instances coal has it all over both gas and oil so far as cost is concerned. But its bugaboo always was the necessity of hand shoveling it into the boiler, and the temper-testing taking out of the ashes. But the automatic stokers have now taken care of that to the queen's taste. They automatically feed the coal to the fire from either your bin or a hopper. The ashes are at the same time deposited in dust-tight cans for easy removal. You can use a low price fuel, generally making a considerable saving. With stoker firing you can have automatic heating of your hot water supply, during both summer and winter, the same as with gas or oil. The Burnham coal boilers, because of their extra long fire travel, are highly satisfactory with either hand or stoker firing. It's that long fire travel that makes their short fuel bill.

As for the comparative cost of oil, gas and coal, you can readily see all depends on conditions where you live.



Then arises that little-big question of Radiators



Finally the owner revolted, and "yanked out" the old radiator, cut a 4 inch deep recess and put in one of the new Burnham Slenderized Radiators which is flush to the face of the wall. Does not stick out at all into the hall. What a difference!

LOOK AT THE LOWER PHOTOGRAPH. See that space-taking, ugly looking radiator, decidedly a blot on this carefully designed Colonial hall.

Now look at the top photo of the same hall, but with a Burnham Slenderized Radiator recessed out of the way. So slender and narrow are these Slenderized Radiators, that you can put them in only a four inch deep recess and let the attractive front of the radiator itself, be the grille. Or if you prefer one of our panel fronts can be used as shown on the opposite page.

But for some locations you really don't need to recess them. They are so narrow, and so restrained in design, you can finish them the same as the walls or woodwork, and they'll scarcely be noticed at all.

Take the one in a living room, shown on page 9. It is no thicker than the length of my first finger. No higher than the sill. Running full width of the window, it fits right in with it.

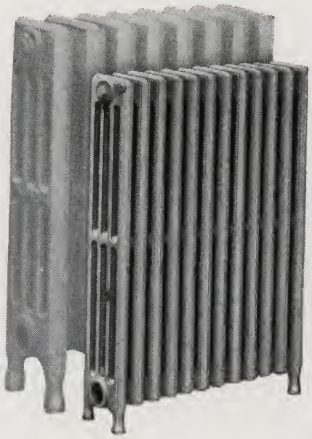


What an eye-sore is that wide ugly looking, old-time radiator in this carefully designed Colonial hall.



OPEN FRONT RECESSED RADIATOR

The Slenderized Radiator being only 4 7/16 inches deep, a recess space can be made between the studding under the window, and the radiator set in it entirely out of the way. So good looking is this radiator, that it is being used extensively without any panel front or grille.



Takes up 40% Less Room
Heats 40% Quicker
Costs No More



RECESSED WITH PANEL FRONT

The Slenderized Radiator can be used with the Burnham panel front. The lower portion of the panel is entirely open and the radiator itself acts as the grille, giving off radiant heat. The grille at the top gives you convected heat, which is an ideal combination giving quicker heating results.

So that then, is what the new Burnham Slenderized Radiators will do for you. Although so much smaller, they are far more efficient than the big ugly ones, that are so utterly impossible in present day homes. The new good-looking Burnhams cost no more than the old ugly ones. Think of that.

Just a word more. The old-time radiators stick out in the room 10 to 12 inches. The Burnham Slenderized ones, no further than your forefinger is long. And let us say again, that in a recess space of 4½ inches between the studding under your windows the Slenderized Radiator will fit in entirely out of the way. Its front will be flush with your walls. So finely designed and finished are they that you need no grille in front of them. They are their own grilles. And another thing, radiators so recessed are highly efficient and don't let anyone tell you otherwise.

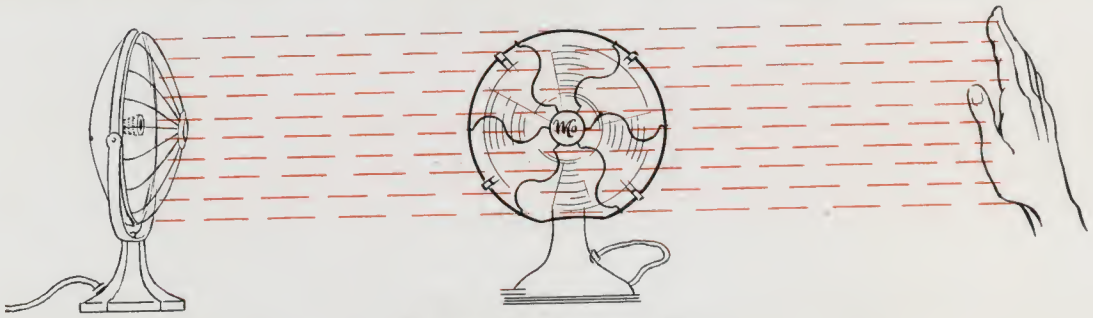


If you were not actually looking for the radiator in this room, you just wouldn't know it was there. When you did discover it, you would have the impression not of a radiator, but an unobtrusive, carefully designed grille. Such is what can be accomplished with Burnham Slenderized Radiators.



The photo at the left shows the way most radiators stick out. This one in a bed room is actually a foot deep, besides setting out two inches from the wall. That makes 14 inches into the room. Yet it is no larger than the usual style of radiator has to be. You would scarcely notice it, if it were a Burnham Slenderized one.

Why it's so important to have Radiators that give you Both Radiant and Convected Heat



Prove It Yourself

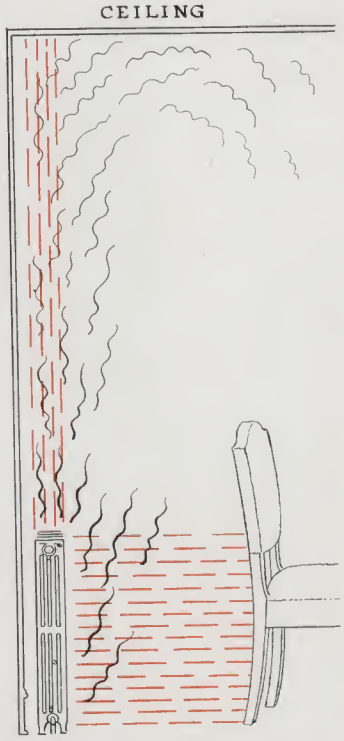
Just to prove to yourself that radiant heat travels in straight lines and is not the least influenced by drafts, try this experiment. Take an electric bowl-type heater such as are so often used in bathrooms. It gives off only radiant or straight-line heat. Now about two feet away place an electric fan so that the breeze will be directly across the path of the radiant heat from the bowl. Hold your hand as shown above. You will find that no matter whether the fan is going or not, you feel the same amount of heat on your hand.

Isn't it so, that just because those words *convected* and *radiant* sound so sort of technical like, that mostly folks haven't bothered to know how important they are?

But they are important, and really not at all technical. Here is just a plain every day explanation of them.

Radiant Heat travels in straight lines. For instance, the radiant heat from a radiator does absolutely no heating of the air through which it passes. It must first strike something like a chair, table, the wall or yourself, and be absorbed, before it does any heating. It is exactly the same brand of heat as the sun gives off. The air through which it passes is not heated in the least. That is proven by the fact that the higher you get in the mountains, or away from the earth in an aeroplane, the colder it is. Naturally it would seem that being nearer the sun it should be warmer. But you see, the sun's radiant rays, heat the earth only when they *strike it and are reflected back.*

Convected Heat is entirely different. Let's go back to the radiator for an example. It gives off radiant heat in straight lines. It also heats by convection. Does a double job. That means it directly heats the air that comes in contact with it.



Both Heats at Work

This sketch shows you in red lines how the radiant heat from a radiator travels. The black lines show the action of the convected heat. It is the combination of them both, that makes Burnham radiator heating systems so much quicker and more economical than any others.

The minute it is heated, it starts to rise in a more or less circulatory or wave-like manner.

Because it first rises towards the ceiling, not until the air up there is the same as the heat itself, does it start coming down to do its job of heating the lower parts of the room.

So you now at once see, that while the radiant straight line heat from the radiator has been warming up the lower parts of the room by reflection, the convected heat has been heating the upper parts by circulation.

Both finally come together. It is obvious that when you have the combination of both these heats, given off by radiators, you get far quicker heating results.

Radiators heat from *both the bottom and the top,* and meet in the middle, so to speak.

Of next importance is HOT WATER

How to keep out of it by Keeping in it



NEXT TO POOR COFFEE AND COLD SOUP, wouldn't you say, the failure to have enough hot water, when it was wanted, has caused more grouching than anything else about "living home"?

Of course, to have good coffee you must first start with enough coffee; you know that's just good sense.

By the same token, if you would make sure of having enough hot water, you must first see to it your supply tank is large enough. So don't skimp on its size to save a dollar or two.

Then make doubly sure your way of heating it, will do the job.

It is a funny thing, that important as hot water is in every home, so many folks will cut costs on the equipment by cutting down on size of tank, or skimping on size of the heating part.

Cut down on the size of your pet closet, but whatever you do, see to it you will have all the hot water you need. Not only have it at certain times — but *all* the time.

There are four different ways to make sure of having it all the time.

1. INDEPENDENT HEATER

Have a Burnham hot water supply boiler connected directly to the supply tank. It is surprising how little fuel they burn and how much hot water they give.

2. OUTSIDE INDIRECT HEATER

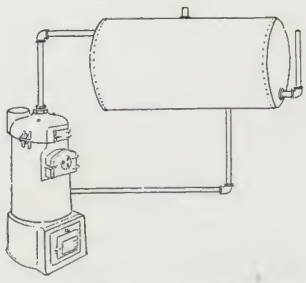
This is a copper coil, enclosed in a cast iron casing, through which the water from the boiler circulates. The coil portion is directly connected to the supply tank, heating it. This Indirect Heater can be connected to the outside of any boiler and it will give highly satisfactory results. You can get Indirect Heaters from us.

3. BURNHAM-TACO TANK

The copper coil heater and tank are combined in one. It is connected directly to the boiler. One of the most economical and satisfactory methods.

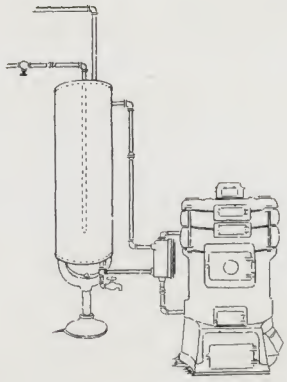
4. BURNHAM OIL BOILER TACO-WATER HEATER

The Taco water heating coil is built right inside the oil burning boiler, and placed at the top where there is always the most heat. It is an ideal fix.



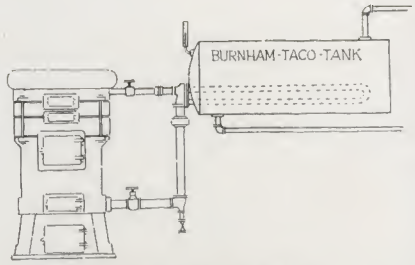
SEPARATE EQUIPMENT

This is the separate or independent hot water supply with its own boiler for heating the tank. It generally burns coal.



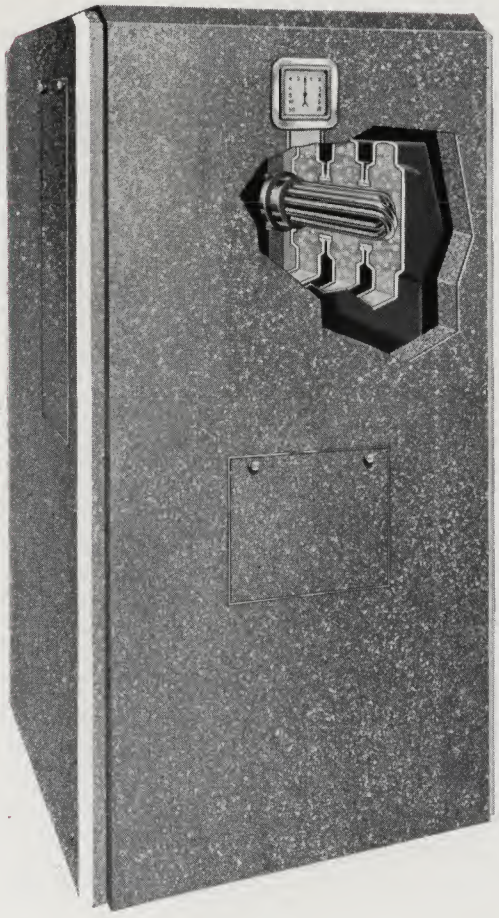
OUTSIDE TACO

Here the Taco hot water heater is on the outside of the boiler and connected to both it and the tank.



BURNHAM TACO-TANK

Instead of the Taco heater being connected on the outside of the boiler, it is right on the inside of the tank itself, with pipes coming from the boiler to the Taco heater. Gives particularly high efficiency.



This cut open view of the boiler, shows how the Taco coil hot water heater is built right into the top of the Burnham Oil Burning Boiler, where it is the hottest. Here you have the height of efficiency.

How the BURNHAM AUTOMATIC HEAT

Furnishes you Hot Water both Winter and Summer

BY AUTOMATIC HEAT, we mean Burnham Boilers burning gas, oil or coal, that are automatically controlled. It used to be, that only gas and oil fuels could be fully automatic. But now that stokers have been perfected for home heating, coal also can be automatic.

One of the strong economy points and great conveniences of Burnham automatic heat, is that it furnishes you plenty of hot water in the summer, as well as in winter. Your boiler is never idle. This is the way it is done.

For the summer, the burner or the stoker is controlled by an Aquastat. You set it at say 180 degrees. Whenever enough water is drawn from your hot water tank to lower the temperature, the Aquastat turns on the fire. Soon as the water is again up to the temperature you desire, off goes the fire. No needless fuel is burned.

If for example, an extra number of baths are being taken, and the water should start coming just warm instead of hot, then the Aquastat will see to its being hot again in a surprisingly short time.

"But," you say, doesn't running the boiler that way heat the house too? Isn't there a waste of fuel?"

No, not at all. The Aquastat attends to that. It never allows the water to get hot enough at any time, to throw heat into your radiators. Automatic control valves on the mains prevent summer-time circulation of hot water through the radiators. As for cost of fuel, it is but little, if any more than other methods.

But supposing it did cost a bit more, what of it, considering that you know you will at all times have plenty of hot water. All the time. Not just at times.

Some Helpful Suggestions on Selecting the Best Boiler for Burning Oil

WHEN OIL BURNERS were first being perfected for home heating, the leading concerns used Burnham regular coal boilers practically exclusively, for oil demonstration purposes.

They did it, because of both the Burnham economy and their long fire travel, which hushed so much of the roaring noise of the flame.

In those days, there was no such thing as a boiler designed especially to burn oil. So all burners were attached on the outside of the boiler.

There are a good many who still prefer it that way. Prefer it, instead of the burner being built in or jacketed inside, as is the Burnham specially designed Oil Burning Boiler.

There is no doubt about the very definite fuel economy in this specially designed Burnham Boiler. It is also attractive looking with its smart jacket. There are certain advantages in having everything built in and out of sight.

Some, however, feel that if a time should come when the cost of oil might be such that they would save money by going back to coal, they want to be able to do it. And the point is a good one.

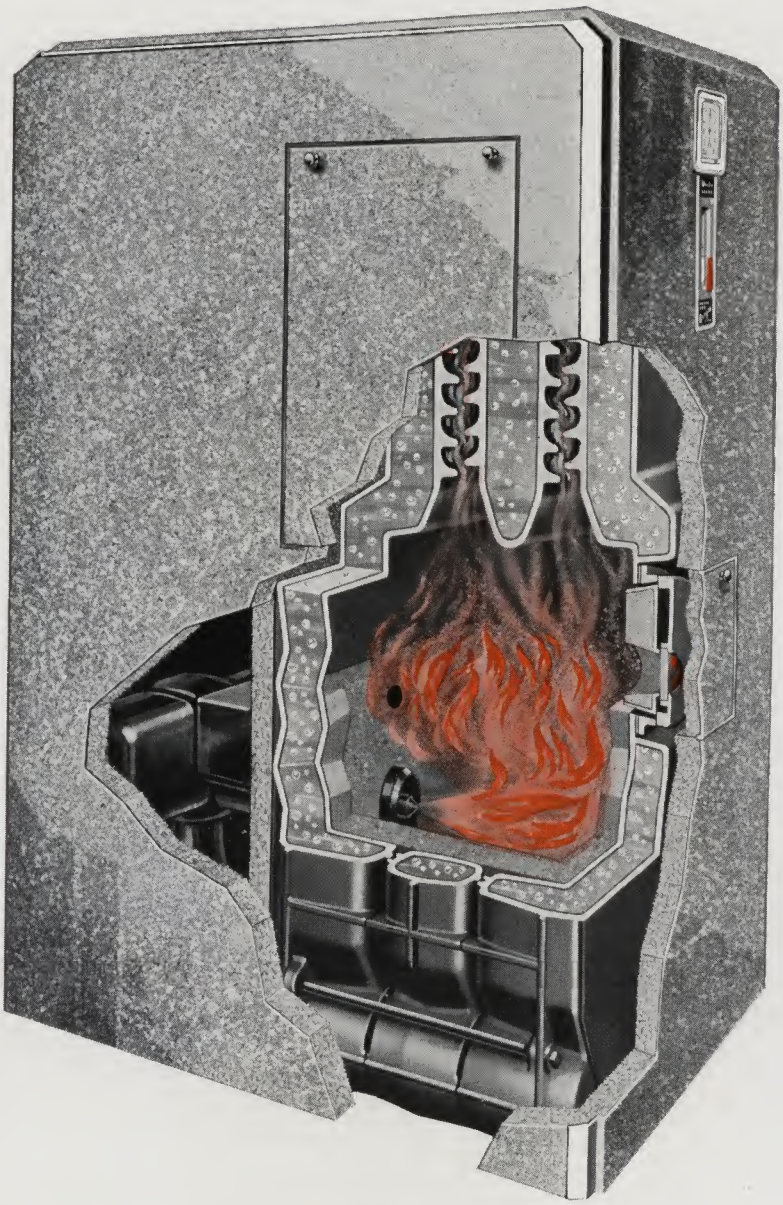
Some people instruct their heating contractor, even though they intend burning oil, to install a coal burning boiler and keep the extra parts on hand for use of coal any time they want to change.

You see, we are in an entirely unprejudiced position in the matter, as we make both types of boilers. It doesn't matter to us which you buy. So our main interest is to help you get the boiler best adapted to your particular needs and individual pocketbook.

We have a most interesting catalog on the special Burnham Oil Burning Boiler which we would be happy to send you. In fact, we suggest your surely seeing it, before deciding on which boiler is best for you.

On page 27 is mentioned other printed matter which you may want. It is sent free.

On page 24 of this catalog are some pertinent questions and answers on the things you should know about heating with oil. Suggest you carefully read them.



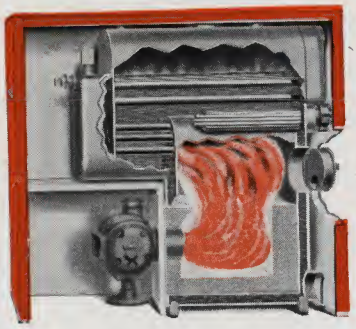
THE BUILT-IN
BURNHAM OIL BURNING BOILER

Everything about this specially designed Oil Burning Burnham is built-in. The jacket is as sleek and clean as a greyhound. Even the Taco hot water heater is built-in. The jacket is pleasing in design. Finished in a neutral grey.

Now a Word About the Oil Burning STEEL BOILER



This photograph of the complete boiler shows you the neat and trim lines of the jacket. Pleasing, wouldn't you say?



We took one side of the jacket off and cut open the boiler to get this picture. Notice the two passes of tubes, the copper coil, Taco Water Heater and also that the water in the boiler extends clear under and around the combustion chamber.

FOR THOSE WHO prefer steel boilers we have a specially designed Steel Oil-Burning Boiler of the efficient "Scotch Marine Type".

It is an unusually economical and attractive boiler, completely welded into one strong compact unit and enclosed in a good-looking two-tone red and grey jacket.

Everything is enclosed within the jacket, even the oil burner itself, so there is very little, if any, possibility of anyone tampering with the controls.

Everything being enclosed any slight mechanical noises are hushed to an almost inaudible whisper. Quiet operation is assured.

Because of the extra heavy layers of insulation which surround the boiler, very little heat is radiated through the jacket — one of its distinct economy features.

This Steel Boiler is designed for any gun or pressure-type of oil burner you may prefer. This is an added advantage as it is possible for you to select an oil burner sold and serviced by a local dealer.

As is the case with our Cast Iron Oil-Burning Boiler, the Steel Boiler is furnished complete with a genuine Biltin Taco Water Heater for year 'round domestic hot water supply. It is also provided with and for all modern safety devices to assure safe and dependable operation.

burnham

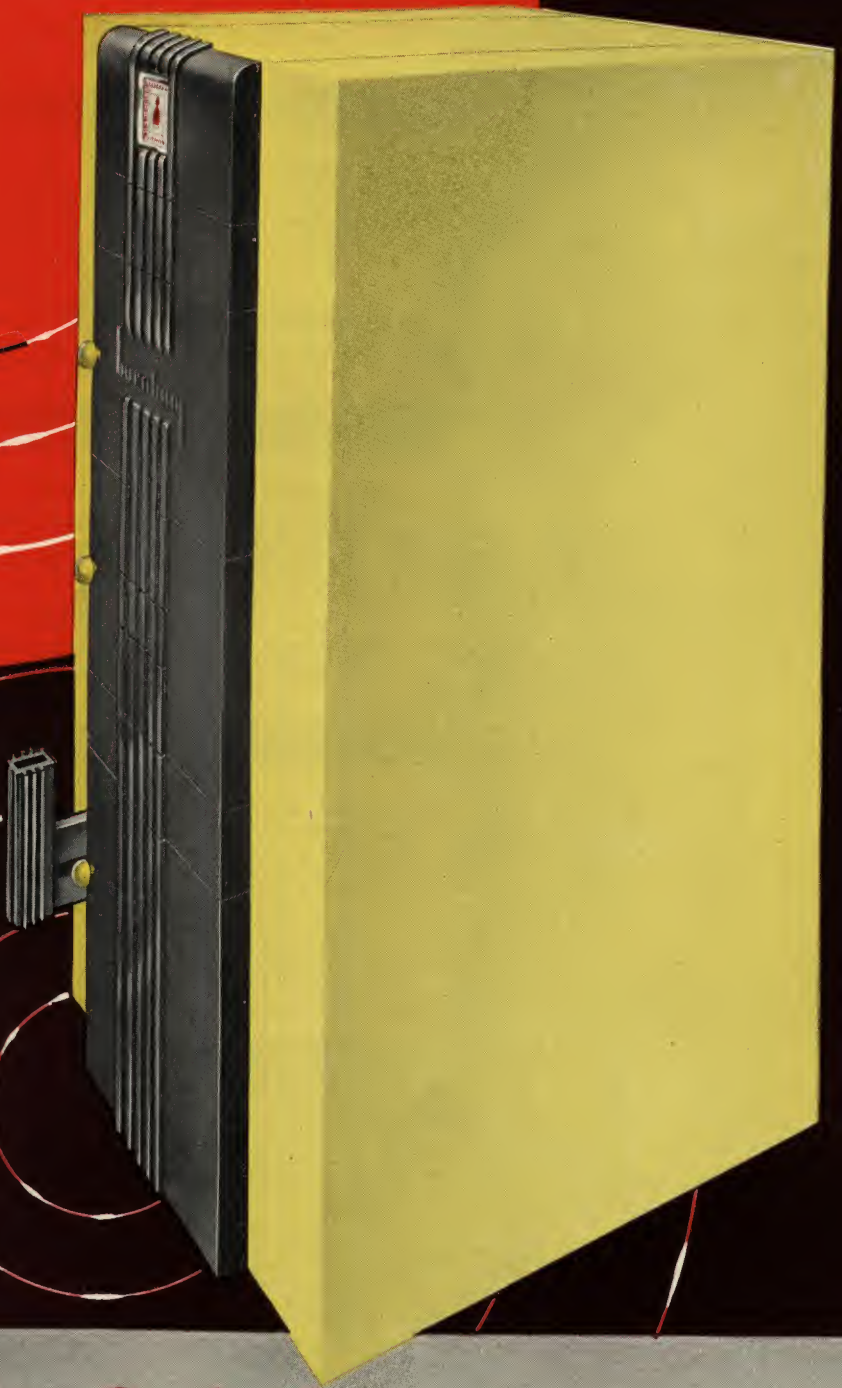
Presents

THE NEW STREAMLINED

YELLO-JACKET

BOILER

FOR ALL FUELS



IRVINGTON, N. Y.

Burnham Boiler Corporation

ZANESVILLE, OHIO

BRANCH WAREHOUSES AND SALES OFFICES

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BOSTON, MASS. (Cambridge) 298 Albany St.
CHICAGO, ILL. 1038 South Kolmar Ave.
ELIZABETH, N. J. 701 Spring St.
GENEVA, N. Y. Gates Ave.
IRVINGTON, N. Y. 2 Main St.
LANCASTER, PA. Dillerville Road
LONG ISLAND CITY, N. Y. 25-19 Borden Ave.
PHILADELPHIA, PA. 31st & Jefferson Ave.
PITTSBURGH, PA. 301 Brushton Ave.
QUEENS VILLAGE, L. I. 222nd St. & L. I. R. R.
SPRINGFIELD, MASS. 153 Plainfield St.
ZANESVILLE, OHIO Licking View

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CHINA—SHANGHAI Route 30, Cardinal Mercier

Plants—Elizabeth, N. J.—Zanesville, Ohio—Lancaster, Pa.—Geneva, N. Y.

BACKED BY BOILER MANUFACT



STOKER FIRED COAL

Extra high base, extra width between legs of sections and extra high crown sheet make these Boilers admirably suited to Stoker firing. Stoker may be installed at front or rear.

MODERN DESIGN GAUGES

Register vacuum and pressure on Steam Boilers, Altitude, pressure and temperature on Water Boilers.

LARGE STEAM AREA

For steadier waterline and dry hot steam.

MORE DIRECT FIRE SURFACE

Fire shines to upper crown sheet between all sections of Boiler providing more direct heating surface than in any other Boiler of comparable size.

HEAT GRABBING FINS

Located where they will absorb the most heat and will not accumulate soot.

NEW LONG FIRE TRAVEL

Gases travel up thru the center between all sections to top into the two upper flues, then to the front into the heat trap then to the back thru the lower flueways and out to the chimney.

LARGE DOORS

For more convenient firing and easier cleaning.

MODERN EXTERIOR

The attractiveness of the Lenaple Yellow and Black Jacket is enhanced by its smooth eggshell finish, which is easily cleaned. The colors were selected by color experts for blending into all decorative schemes.

DEEP ASHPIT

Requires less frequent cleaning and provides more space for automatic firing devices.





INTERMEDIATE SECTION

Note the secondary combustion chamber which extends from bottom crown sheet to top. This secondary chamber between all sections provides more direct heating surface and increases automatically with the addition of each section.



Burnham Cosy Comfort Heat

Next to heating all outdoors, greenhouses are the most difficult buildings to heat. A Boiler failure may mean the loss of thousands of dollars in plants and tender flowers. Wouldn't you say then, that Boilers for Greenhouse heating must be super-dependable?

We are proud of the fact that more Greenhouses are heated by our Boilers than all others combined.

URING EXPERIENCE SINCE 1873



LARGE NIPPLES
For better steam distribution and complete circulation of water thru-out Boiler. No header required.

TACO HEATER
For storage tank or tankless operation year 'round. (Tankless type not recommended in hard water districts.) Heaters are completely built into Boiler. No part extends beyond Jacket.

HEAT TRAP
Retains heat in Boiler and reduces off-period losses.

EXPANSION SECTION ASSEMBLY
Space provided (filled with Asbestos) between sections to allow for expansion and contraction. This space prevents breakage due to building up of rust.

PROVISION FOR AUTOMATIC CONTROLS
Necessary tappings are provided in back for Low Water Cutoffs, Aquastats, Pressure Controls, etc.

DEEP COMBUSTION CHAMBER
Provides ample space for more complete combustion of gases.

INSULATION
Jacket is heavily insulated against heat with criss-cross air cell insulation.

AIR FOR COMBUSTION
Air is introduced from rear, but instead of being pulled up thru the rear section, is drawn thru the entire grate and up between all sections, producing complete combustion.



OIL OR GAS FIRED
Burners may be introduced from front or rear. The extra deep base and extra high combustion chamber provide ideal conditions for high combustion efficiencies. Off period losses are reduced by Heat Trap.



ENCLOSURE FOR BURNER
When boilers are fired from the front, an Enclosure can be furnished for enclosing the Burner. The Enclosure provides a space for Burner of twenty-two (22) inches outside of boiler. Width is twenty-four (24) inches.

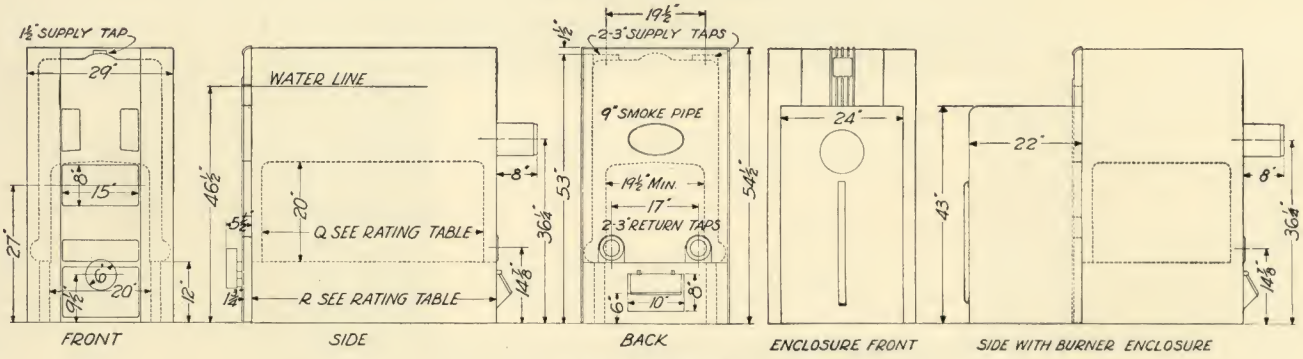
Our new Yello-Jacket Boiler presented herein is the result of experience gained in quality boiler manufacture since 1873.

It was especially designed for safe, dependable and economical operation with all fuels. By slight changes in the Base you can switch from one fuel to another—Coal, Oil or Gas.

These new Yello-Jacket Boilers may be purchased on a time basis at the lowest interest rates. Write for further details.

Burnham Cosy Comfort Heat

DIMENSIONS



RATINGS

Boiler Number		Installed Radiation Sq. Ft.*	Grate Area Sq. Ft.	Minimum Oil Required Gallons Per Hour	Htg. Surface Sq. Ft.	"Q" Length Comb. Chamber	"R" Length Boiler Proper	Furnace Volume—Cu. Ft.	
Hand Fired	Automatic Fired							Grate to Crown	Floor to Crown
STEAM									
YS-30	YS-30-A	325	2.34	1.1	29.64	16"	20¾"	3.9	6.2
YS-35	YS-35-A	400	2.86	1.3	35.64	19½"	24¼"	4.8	7.6
YS-40	YS-40-A	475	3.37	1.5	41.08	23"	27¾"	5.6	9.0
YS-45	YS-45-A	550	3.89	1.7	47.08	26½"	31¼"	6.4	10.4
YS-50	YS-50-A	625	4.40	1.9	52.52	30"	34¾"	7.3	11.7
YS-55	YS-55-A	700	4.91	2.1	58.52	33½"	38¼"	8.2	13.1
YS-60	YS-60-A	775	5.43	2.3	63.96	37"	41¾"	9.0	14.5
WATER									
YW-30	YW-30-A	520	2.34	1.1	29.64	16"	20¾"	3.9	6.2
YW-35	YW-35-A	640	2.86	1.3	35.64	19½"	24¼"	4.8	7.6
YW-40	YW-40-A	760	3.37	1.5	41.08	23"	27¾"	5.6	9.0
YW-45	YW-45-A	880	3.89	1.7	47.08	26½"	31¼"	6.4	10.4
YW-50	YW-50-A	1000	4.40	1.9	52.52	30"	34¾"	7.3	11.7
YW-55	YW-55-A	1120	4.91	2.1	58.52	33½"	38¼"	8.2	13.1
YW-60	YW-60-A	1240	5.43	2.3	63.96	37"	41¾"	9.0	14.5

* RATING NOTICE—Ratings listed under "Installed Radiation" are based on net installed radiation and guaranteed, provided the quantity of installed radiation is sufficient to properly heat the building and computed in accordance with methods adopted by the American Society of Heating and Ventilating Engineers, the Heating, Piping and Air Conditioning Contractors' National Association or as recommended by us.

Nothing need be added for normal piping (20–25%) or pickup but allowances must be made for Domestic Hot Water Supply, before selecting boiler, as follows:

WITH STORAGE TANK

Steam System—Add one (1) square foot per gallon water required to installed radiation.
Water System—Add two (2) square foot per gallon water required to installed radiation.

WITH TANKLESS HEATER

Steam System—Add fifty (50) square feet for each bathroom to installed radiation.
Water System—Add eighty (80) square feet for each bathroom to installed radiation.

FUEL REQUIREMENTS

Heat value of Coal must be not less than 12,500 B.t.u. per pound.
Heat value of Oil must be not less than 140,000 B.t.u. per gallon.

EQUIPMENT FURNISHED

HAND FIRED BOILERS

STEAM—No. YJ40 Taco Heater—40 Gallon (extra); Insulated Jacket; Vacuum and Pressure Gauge; Chromium Water Gauge Set; Automatic Damper Regulator; Chromium Safety Valve; Set Fire Tools.

WATER—Insulated Jacket; Altitude, Pressure Gauge and Thermometer; Automatic Damper Regulator; Set Fire Tools.

AUTOMATICALLY FIRED BOILERS

STEAM—No. YJ64 Taco Heater—40 Gallon (extra); Insulated Jacket; Vacuum and pressure gauge; Chromium Water Gauge Set. No. 70 McDonnell Low Water Cutoff (extra); Chromium Safety Valve; Flue Brush.

WATER—Insulated Jacket; Altitude, Pressure Gauge and Thermometer. No. YJ64 Taco Heater—40 Gallon (extra); Flue Brush.

TACO HEATERS

Other sizes can be furnished as follows:

† HAND FIRED BOILERS

No. of Heater	Gallons Capacity
YJ40	40
YJ64	66
YJ1510	150

‡ AUTOMATICALLY FIRED BOILERS

No. of Heater	Gallons Capacity
YJ64	40
YJ1510	100
TANKLESS	
YJI-210	210

† Capacity of heaters for Hand Fired Boilers is based on 212° Boiler Water 100° rise in 3 hours.
‡ Capacity of heaters for Automatically Fired Boilers is based on 180° Boiler Water 100° rise in 3 hours except Tankless Heater which is rated on the basis of 1 hour.
Note: Tankless Heaters not recommended in areas where excessive lime is present in the water.

Form No. 805—8-15-38

Printed in U.S.A.



Streamlined for efficiency, cleanliness and beauty, the Yello-Jacket and Exterior was designed by Spence Wildey, well known industrial designer of the George N. Wallace Company.

But you ask what of Coal Stoker-Fired and Gas-Fired Boilers for Automatic Heat?

Glad you asked that question, even though we have touched on them already. But it is so important that just touching isn't enough. So what do you say if we go into it thoroughly.

Gas

SOME FEEL THAT GAS is the coming fuel. There isn't a doubt of its being one of the cleanest, fully automatic heats there is. In sections where the gas rate is favorable, we recommend its use. Burnham has a worthy gas-fired boiler designed specially for the purpose.

It's an interesting thing that this boiler shows in service, an economy equalling that of the tests made at the plant, conducted very naturally under favoring conditions.

One of the decided advantages of gas heating is its absolute freedom from care. Once the boiler is installed and connected to the gas, you need give it practically no more attention than you do the water in your home. Like it, it's always there to instantly turn on. No bother watching the coal bin supply, or amount of oil in the tank. No fear of running out of fuel when snow may hold up truck deliveries. No stopping of heat if the electric supply should fail.

The great increase in home gas heating the last year shows plainly enough the rapidly increasing appreciation of its care-free advantages.

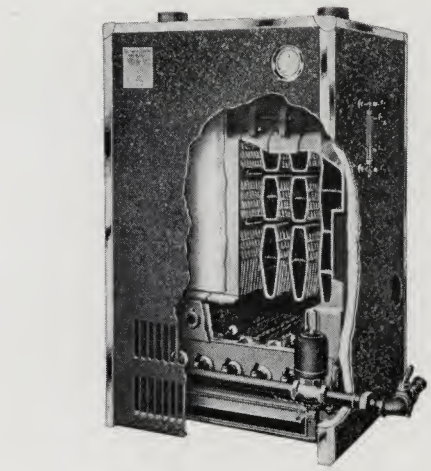
Stoker-Fired Coal

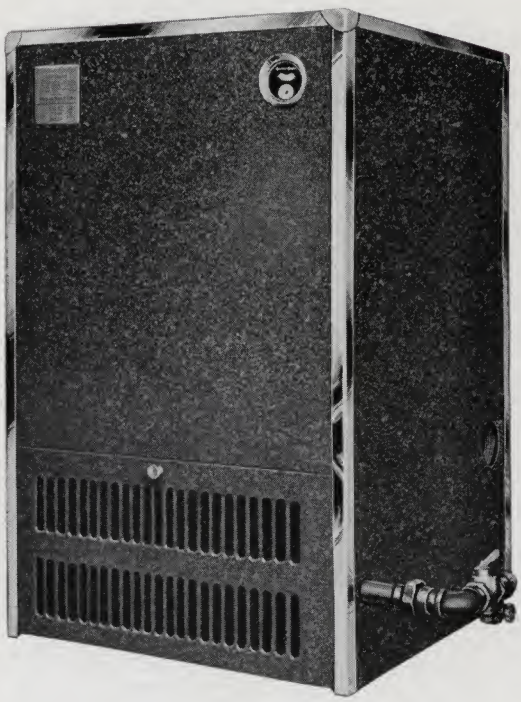
Automatic or mechanical coal stokers have been used for a long time for industrial boilers. And for a while the makers certainly did have a lot of grief, when they tried to cut down "papa's pants to fit Willie" so to speak, in attempting to adopt those stokers for home heating boilers.

Happily for you, that's all a thing of the past. The present day stokers are quite wonders of ingenuity. They are just as dependable as oil burners. Burn a low priced coal.

Fuel can be either put in hopper by hand, or automatically fed from the bin. The ashes are mechanically deposited in cans, doing away with the dust objection, not to mention the work and the bother hand shovelling means.

See pages 25 and 26 for Questions and Answers About Stokers and Gas Boilers





This special Burnham gas-fired boiler is mighty good looking. It has a name for economy.

Air Conditioning Your Home in the



The Unit Air Conditioner

Here is the complete Conditioner enclosed in its cabinet with deflector grille on the top. It is 39¼ inches long, 23¾ high and 13¾ inches deep, which is no larger than the usual enclosed radiator. It is connected to the steam or hot water system the same as any radiator. The water for the humidifier is piped from your water supply, which is kept at a uniform level. As a precaution there is an overflow pipe. Center panel is removable for easy access to the Conditioner.

THE reason—the only real reason—for having Air-Conditioning in your home, is that it adds to your comfort and makes it healthier for all. It is not just a case of being in style or a passing fad. It is now one of the recognized necessities.

The Burnham Conditioner being a direct part of the heating system, balanced with it, and controlled by it, it does not supply moisture when it is not needed. This prevents the clouding of the windows.

It is only when the heat takes the moisture out of the air, that it needs replacing. That is why so-called Air Conditioning, that mainly means humidifying and filter-cleaning the air, should be a direct part of your heating system. There is a distinct economy in it.

The superiority of radiator heat in so many ways, especially in its simplicity, economy and positiveness in heating any and all rooms in any weather, regardless of the direction of the wind, makes the radiator system the ideal one for combining with Air Conditioning.

Happily for you the Burnham Simplified Unit-Air-Conditioner Radiator System, can offer you everything that any other system of heating can, while at the same time, give you several distinct advantages they can't.

Whether you believe it or not, a dry heat is not only an unhealthy one, but it is an irritating, unhappy one.

You may shrug your shoulders and say: "That's all just selling talk." If it is, then tell us, will you, why the papers and magazines have for so long, had so much to say about the importance of the right amount of moisture in the air? Not only moist enough, but filter-cleaned as well? Can all the doctors be so all wrong in advising it? Can so many of the rest of us be laboring under a delusion?

Dodge the facts if you will, but a lot of home health and happiness depends on the right heating. But heating your home right, doesn't only mean being comfortably *warm*. There is a lot more to it than just warmth.

You surely know that dry heat dries out nose and throat membranes, and aggravates throat troubles. And dry membranes are always open traps to catch cold germs and all the other menaces.

But don't allow yourself to be misled. *All* home heat is dry. It is, unless some mechanical equipment is used to put the natural healthy amount of moisture back into the air, *that the heat always takes out.*

Don't allow anyone to tell you that sufficient moisture is drawn in through the cracks around doors and windows to balance what the heat dries out.

The only healthy heat is one that first warms the air, and then balances it with the right amount of moisture that the heat unfailingly takes out.

While you are putting that moisture back, it is only another step to filter the air, making it sweet and clean.

Such are the things that The Burnham Unit-Air Conditioner System will do in Winter. If you wish, it can also cool your rooms in Summer.

The Conditioners, being heating radiators as well, can be used in place of an existing radiator or radiators in connection with present systems. They are just as applicable to old systems as new ones. The Burnham Unit-Air Conditioners can be purchased separately.

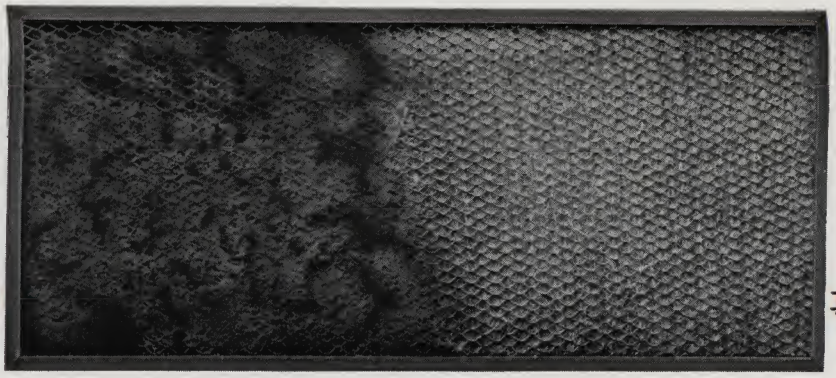
In the summertime you can run the fan and by giving a circulation to the air, relieve that dead heaviness that after all, is what you actually feel more than the Summer heat itself.

It will do the work of an electric fan, only much better. It is out of sight, noiseless and not only evenly distributes the air instead of just stirring it up in one spot, but at the same time filters out dust, pollen and dirt.

Most Practical, Economical Way

The Dirt It Takes Out

This double-layer spun glass filter, was taken from one of our Unit-Air Conditioners after three months use. The first layer of coarse spun glass caught the threads and lint. The second one is fine-spun, and captured the dust. We cleaned off the right half just to show you what the filter caught. It is hard to believe that the home air we breathe in the average living room, is filled with so much dirt.



About That Home Air Dirt You Breathe

If you still think the air in your home is free from dirt, just look at the before and after photograph above, of a spun glass air filter screen after three months use in a Burnham Unit-Air Conditioner. It looks like the inside of a vacuum cleaner bag.

When that filter screen was put in the Burnham Unit-Air Conditioner, it was as clean as shown by the right hand half which we cleaned off just to show you the "before and after". Before it was cleaned the entire filter was practically as "black as your hat".

You say, oh well, that must have been in Pittsburgh or Birmingham. No, it wasn't! It was in a home in New Rochelle, New York.

If all that in-the-air-dirt hadn't been filtered out, it would have been breathed, scattered in dust on the furniture, and gradually soiled the draperies and walls. Some of it would have settled on the rugs to be ground in, shortening their life.

Then there is the children's side. No end of pains are taken and money spent these days on children's food and to see that they get plenty of healthy fresh air. Having seen to all that, is it fair to bring them into a heat-dry home and let them breathe air that is filled with a dry dust? A dust that carries germs, and dries out membranes making ideal infection collecting points.

These are proven facts you simply can't dodge.

The question therefore is, do or don't you want clean, healthfully-moistened air to breathe!

It costs so little to have clean, sweet air rightly humidified, as a direct part of your heating, that surely the cost need no longer stand in your way. It need not, that is, if you put in the Burnham Unit-Air Conditioner, that takes up no more room than a grille-enclosed radiator, and actually is a radiator as well.

The Cooling It Does in Summer

Yes, you are right, complete Air Conditioning, as most think of it, both humidifies in Winter and cools and dehumidifies in Summer. But by far the most important feature, so far as health goes, is the Winter cleaning and humidifying of the heated air.

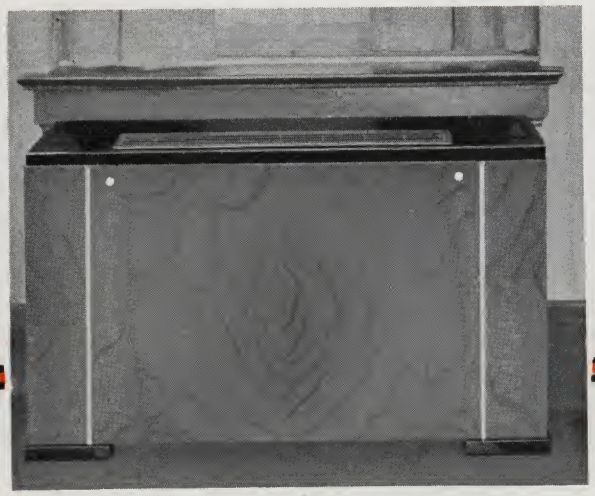
Before you spend any money for cooling, here is a point to bear in mind. The real cause for one feeling the Summertime heat in a room, is because the air is *dead*. Start that air moving and you feel cooler. That's the "why" of a fan, whether it be the hand-propelled palm leaf, or the usual buzzing electric one.

The Burnham Conditioner, although automatically controlled by a thermostat, also can be furnished with a hand control so you can run the fan only.

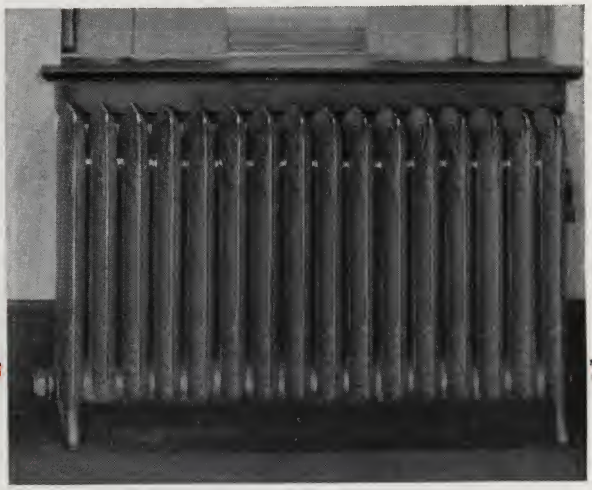
In the Summertime the fan can be turned on, and the deadness of the air overcome by giving it an agreeable movement. Frankly, the air will be no cooler, because it is the same temperature air being circulated. But it will *feel* cooler, because not only has the movement of the air *lightened it up,* but its passage over your skin will cause quicker evaporation, which actually does make you cooler.

Although the complete Burnham Unit-Air cabinet for radiator system of heating is no larger than the usual grille-enclosed radiator, it accomplishes everything that a complicated duct system does. There is no room-taking outfit in your basement. No ducts to clutter it up. No grilles in your baseboard or walls. No registers in the floor.

With the Burnham Conditioner, you can air-condition one or any number of your rooms. No need to condition the whole house unless you want to.

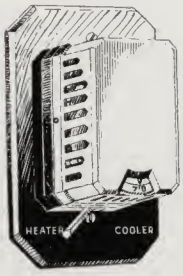


The heating radiator is right inside this attractive air conditioner cabinet. It is finished in burl walnut graining combined with top and feet of black baked enamel. There's just a touch of chromium to add to its pleasing effect. It also contains the air cleaning filters, the humidifier and the motor-driven fan that sucks in the cool air at the bottom and sends the heated air out at the top, pure, sweet and conditioned.



This radiator which it replaced, is larger than the complete Air-Conditioner cabinet. Takes up more room and has far less heating capacity. All it does is heat. The Conditioner not only heats but controls the temperature, filter-cleans the air, humidifies it, and then circulates it, giving it a freshness and buoyancy.

A further caution and some more Important Facts



Combination Hand And Thermostat Control

This combination control can be placed anywhere in the room to your convenience. You set the thermostat at the temperature you want, and it automatically turns the heat on and off by starting and stopping the fan. It can be made to control your boiler thereby giving you 3 points of control which has advantages over the one point control. A complete individual room control if you wish it. Beneath the thermostat is a hand switch, so you can set the Conditioner for either heating or cooling by a mere flip of the switch. Or, if you do not have refrigeration, to take that heavy deadness out of hot Summer days, by keeping the air in constant circulation.

HOPE you won't mind if we caution you once more, not to let anyone make you think that just humidifying the air is air-conditioning it. If that's all you want, then unattractive as they are, you might just as well have water pans sitting around on your radiators.

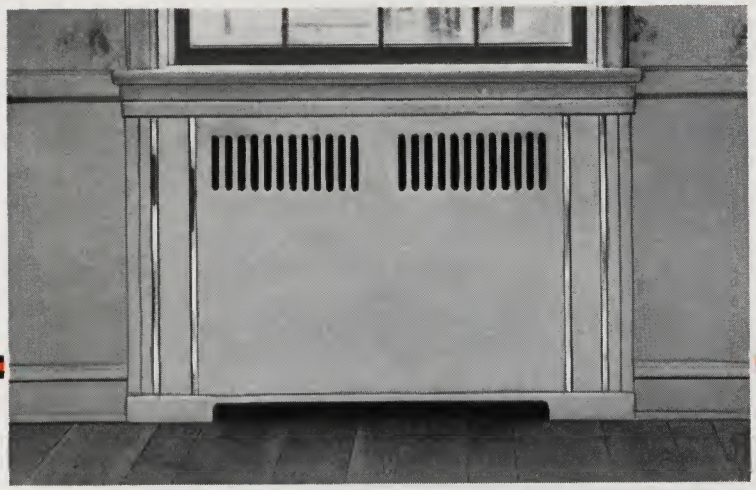
Any kind of heat that does not *also* filter-clean the air, and give it an additional agreeable circulation is not air conditioning.

And always bear in mind that radiator heat is by far the most positive and all around satisfactory of all heats. It heats regardless of the direction of the wind or how hard it may blow.

You can send it anywhere at any time, your garage included, without any restrictions being made by the health authorities.

Radiator Air Conditioning By Far The Best

If, therefore, radiators are the most effective way of heating, they are also the most effective for air conditioning. There is no way of getting around that fact.



This Air Conditioner with its Burnham Panel Front is recessed beneath an outside window. It fits flush with the baseboard. Not the least trouble to install. Screws directly to the wall. The centre of panel is removable for easy access to the conditioner. Furnished in prime coat for finishing in harmony with your color scheme.



Here is a view of the interior part of the Unit-Air Conditioner showing at the bottom the double spun glass dust filter, and above it the 100th h.p. fan, and above it the humidifier. The fan draws the air through the filter, cleans it, and then drives it up against the radiator that heats it. This same unit is used if recessed with grille opening or standing free cabinet.

Burnham Combines Them

The Burnham Unit Air Conditioner is a radiator plus an air filter, humidifier, and circulator. It is designed to replace a radiator in present system or new house with equal ease and simplicity of installation. It is not an extra piece of equipment but is used to replace the ordinary radiator. It's installation requires no more equipment and but little more labor than to install the familiar radiator.

In many cases two or three radiators may be eliminated thus making the installation easier than when the conditioner is not used.

You still have the same dependable, positive acting radiators, only some of them are the Burnham Unit-Air Conditioners. They can be out in the room or recessed out of the way same as any other radiator.

Separate Room Control

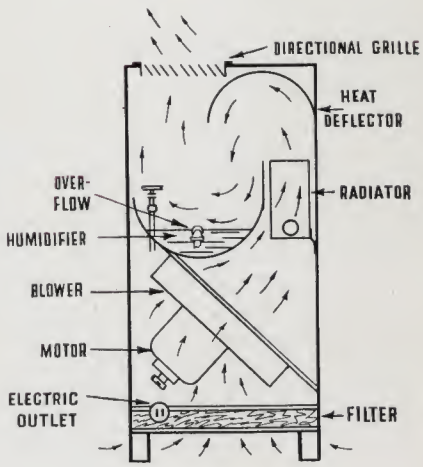
With the Burnham system you can air-condition only one, or all the rooms. In most cases three units are sufficient. One each in the living room, dining room and master bed room is satisfactory. With this system individual control is possible. Varying weather conditions and requirements within the room are easily and quickly met. Has both thermostatic and hand controls.

The Matter of Cost

The separate Burnham Unit Air Conditioner makes it possible for the low priced home owner to enjoy air conditioning in one or two rooms. It is so reasonably priced and cost of installation is so low it comes within the reach of the many.

In new house construction, often it costs so little more than an ordinary steam or hot water system that it is negligible.

The separate Unit-Air Conditioners, or the entire Burnham heating system, can be secured through your local heating concerns. If none are available in your vicinity write us and we will gladly arrange to serve you.



More About The Humidifying and Deflector Grille

This sketch shows you how the fan driven heated air, is thrown down on the surface of the water in the humidifier, where it picks up its natural content of moisture and then flows out the deflector grille into your room. The deflectors are set at just the right angle to throw the heat away from your draperies and out into the room at a height to give the quickest most agreeable heating results. It does not come out with a blast, but just a gentle steady noiseless flow. You get more and quicker heat from the Conditioner than any radiator alone. It means fuel economy. When the fan is off, no heat is driven into the room. But there is a certain amount coming into the humidifier chamber, causing just enough moisture to be constantly delivered into the room to preserve an agreeable healthy condition.

You Ask Which Is Better the Round or Square Boiler?

NEITHER IS BETTER in the case of Burnhams. But both do best the job they are built to do. So far as economy is concerned, one is just as heat thrifty as the other. Sometimes one costs more than the other—and that often decides it. So let's look each of them in the face and make them tell their own common sense story to you.

THE ROUND BOILER TALKS



"My head may look swelled. And it is. That's because I'm built to do steam heating as it ought to be done."

YOU SEE IT IS LIKE THIS. I am sort of a tea kettle grown up. A tea kettle with long pants on, so to speak. Because I have always looked like a cross-section between a kettle and the old dining room stove, a lot of folks could understand me. They just put me down as sort of a glorified stove with a tea kettle attachment, that you could hook up to radiators and make everybody heat happy.

"So I sprang into popularity over night. If I do say it myself, there's a lot to be said in my favor. For the moderate size house, you certainly would have a hard time beating me.

"Of course, I have a lot of relations in the round boiler family which I don't take much stock in. They are offshoots of the sturdy old Burnham stock under other names. They have married out of their class and cheapened themselves. You know what that means.

"They doll all up and put on the dog. But somehow I just can't feel sure of them.

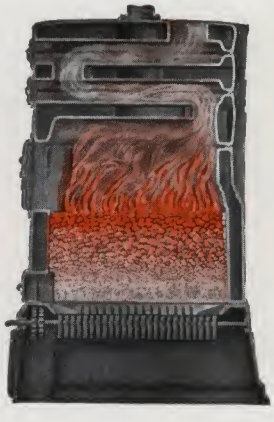
"I give you the real blown-in-the-bottle-brand of Burnham Cosy Comfort Heat. The heat from a pure blood Burnham Round Boiler. Burn coal, gas or oil. I make a powerful good showing automatically fired. In fact, am quite a general favorite with the oil burner folks. You will find me a warm friend on whom you can unfailingly depend."



"Here I am with the swelling out of my head ready to do a specially fine job of hot water heating, the way it also should be done."

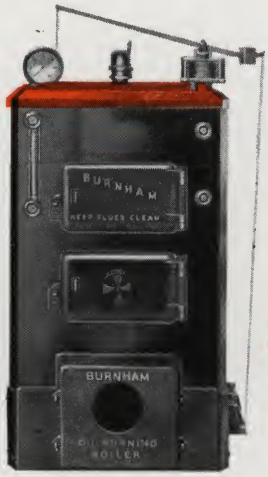
"It isn't often I open up and let folks in on the inside. But sort of feel I can depend on you. So here I am opened up. Those wrinkles over the fire greatly increase my fuel saving usefulness. But why go into such details here."





"Now you are on the inside, you might as well take a look at my 'inmost innards'. Am built in sort of layers or sections. Note how the hot gases pass back and forth. It is called fire-travel. Because my fire-travel is so long, my coal bills are short."

THE SQUARE BOILER HAS ITS SAY



FOR OIL

"When it comes to heating with oil, you take out my grates and my Burnham family will furnish you with a nozzle plate in place of the ashpit door. I certainly do a satisfactory job of heating with oil."

CONSIDERING how the Burnham Round Boiler is my full blood brother, it just wouldn't do for me to say anything against him. Don't know that I could anyway, he is such a dependable, straight-shooting, sure-fire performer.

"But, as is the case with any two brothers, some like one and some the other. Admittedly, there was a time when more liked him than liked me. But it is about even now, with the odds quite a bit in my favor.

"You see he is built in layers — one on top of the other. I am built in sections, one side by side with the others.

"In cases where the cellar ceiling is low, I have a way of fitting in. Should additions be put on the home, another section can be added to me, when there might not be room for one on top of my round brother.

"So far as heat thriftiness is concerned, don't know as it becomes me to brag a whole lot. Still there are folks who simply wouldn't consider a round boiler. They like my squarish shape fire box and the easy way my grates shake. Some sizes have double grates, making it possible to run half the fire in early fall and spring, when only a little heat is needed. And all the grates when real winter weather comes. There isn't a doubt I save them fuel.

"My fire travel is long. Goes three-times-back-and-forth my full length, regardless of how many, or how few sections I have. It is that long fire travel that makes my short fuel bill, just as it does in the Round Burnham.

"Folks also like my swell clothes. My tailored jacket I'd have you know, is of the latest cut. It fits right into any dolled up cellar or recreation room, and unfailingly does the Burnham family full credit."

FOR COAL

"Here is the way I look when ready to do you a real job of heating with coal. Wish I could show you how thoroughly insulated the inside of my jacket is."



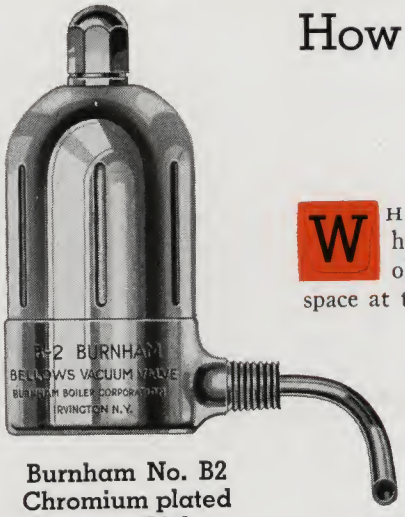


INSIDE INFORMATION

"Had the famous surgeons, the Mayo brothers, cut me open this way, so you could see my long fire travel that makes the Burnham short fuel bill."

The Importance of Air Valves

How they Save you Money



Burnham No. B2 Chromium plated Radiator Valve

It quickly lets the air out and then closes tight so it can't sneak back in, when the radiators cool down.

WHETHER YOU'LL ADMIT IT OR NOT, air is radiator heat's biggest enemy. It is the fighting out of the old law that two things cannot occupy the same space at the same time.

If there is air in your radiators, the steam will do its best to push it out. If there is no vent place, then it will try to compress it — and the battle is on. Sometimes you hear the struggle, in disagreeable knockings and bangings.

Often it results in only a portion of your radiators heating. Or, if you have air venting valves that are not any too good, the air may be let out so gingerly that the slow creeping across of the heat makes you disgusted with the whole heating system.

You may be burning plenty of fuel and still getting only stingy heat. So see to it that each one of your radiators is equipped with Burnham dependable air valves.

One kind lets the air out, but soon as the heat dies down a bit, lets it creep back in. Most valves, sorry to say, are that way.

By far the better way is to use the Burnham Valve that both lets the air out and then keeps it out. They cost more, because obviously they are worth more.

It is a smart idea to also vent the mains. That means they are at once freed so the steam can quickly get to your radiators. The air that would otherwise be pushed into the radiators, is let out before reaching them.

Some folks cut costs on their heating by using cheap valves that soon clog up and cease to function.

Burnham valves are chromium plated, and when rightly installed, are unconditionally guaranteed for one year. So see to it that you get Burnhams.



Burnham No. 6 Valve

for quick venting of air in mains



Burnham No. B4 Chromium plated Valve

for Mains, Coils and Risers

Burnham Air Valves are also available in the adjustable type.



Burnham air valves keep those invisible hammer devils from getting into your radiator and raising hob with the peace and quiet of your home.

Your Questions Answered

THESE QUESTIONS are the ones which are most asked either by letter or in person. Some of them may cover just the things you may also want to know. So here they are: However, don't hesitate to ask us anything else you may have in mind. Do it whether it is about just your boiler, or any other phase of the proposed heating you want to surely be satisfactory; or a system that is already in, and not satisfactory. You will find us rather pleasant people to do business with.

ABOUT HEATING IN GENERAL

1. What proportion of the cost of the house will the heating be?

It averages about 9½ per cent. For example, for a house costing $5,000, at least four hundred and fifty of it would be for the heating. For a $10,000 one — $950.

2. Which costs more, hot water or steam, and what is the percentage difference?

Steam costs less. Hot water costs about 20 to 25 per cent more because there must be double the amount of piping and the radiators are 60 to 65 percent larger.

3. Why does hot water require twice the piping of steam?

With steam, the one pipe carries both the steam from the boiler to the radiators, and the condensation from the radiators back to the boiler. With hot water, the entire system is filled with water, and in order to keep in constant circulation must have the same size pipes leading from the radiators to the boiler, as from boiler to radiators.

The radiators have to be much larger because hot water seldom gets much above 180 degrees and averages about 140; while steam is always at least 212 degrees.

To get the same result from hot water as steam, you therefore, must have a larger radiator to make up the difference of from about 40 to 70 degrees.

4. How does Vapor or Vacuum system differ from steam or hot water?

By the use of specially constructed valves, a partial vacuum is created in the pipes and radiators which lowers the boiling point of the water, allowing a hot vapor to enter the pipes several degrees before the boiling point of the water is reached.

The condensation is returned to the boiler by separate small pipes, insuring absolutely no interference with the passage of the vapor.

The partial vacuum created, holds the heat, and the valves prevent the air from returning to the system.

Therefore, the radiators hold the heat longer than steam radiators.

The radiators are about the same size as for steam. In effect, you get approximately the same even temperature and economical results as with hot water, with rather more flexibility. Vacuum Systems cost approximately the same as hot water.

5. Which burns the least coal, hot water or steam?

Some claim there is very little difference in the coal you burn. But hot water has an advantage in the way the latent heat in the water keeps right on heating a considerable time after shutting the fire entirely off. When you start the fire you do not have to run the water up to practically boiling point before you get any returns, as with steam.

Hot water begins heating as soon as there is enough heat in it to make the water circulate. Just logically it should save fuel.

6. Can I enlarge a Burnham if we should later on decide to enlarge our house, or must I either buy too big a boiler now, or get an entirely new one then?

Most assuredly you can add to a Burnham as you add to your home. It's built in sections, quite like a sectional book case.

It's one of the strong points of all Burnhams.

7. Which is better the round or square boiler?

Glad you asked that question. It's important. Just turn to page 20.

8. Is there some kind of an attachment I can put on a Burnham, so it will give me a hot water supply?

Yes, indeed there is for steam boilers.

It's one of the cleverest little arrangements you ever saw.

One that fastens right on the side tappings of the boiler.

It is but little larger around than the usual can of tomatoes and about 12 inches long, but it will supply you with from 30 to 100 gallons of hot water every hour.

These heaters are supplied at slight additional cost.

For water boilers, a coil can be put right in the fire pot and give fairly satisfactory results.

For the best of results, however, we recommend our regular Burnham hot water laundry stove No. 11, which will supply abundant hot water for the average house.

9. Do we have to buy a Burnham direct from your boiler plants?

Not at all.

All heating men know about Burnhams, even if they may not have them in stock.

You can buy direct from them, and they will order it from us.

Should there not be a boiler man in your town, will be glad to have you write to us direct.

If you are building or remodeling, and employing an architect, see to it that he specifies a Burnham in your heating specifications.

To insure prompt deliveries we have a stock of boilers in fifty main distributing centers.

10. If I buy a Burnham can we be sure of always getting parts?

Just as sure as you can of any boiler.

We have been making boilers for well nigh 70 years and never failed anyone yet.

From the look of things we will be doing business long after you'll need a boiler at all.

Questions about OIL HEAT

1. Do I have to have special radiators or piping for oil heating?

Most assuredly not. The same radiators, the same piping used for any hot water, steam or vacuum system, are used. However, before you decide on the kind of radiators, be sure and give careful consideration to the Burnham Slenderized ones, as told about on pages 8 and 9.

2. Do I have to buy an out-an-out oil burning boiler? Can't I use an oil burner with my present boiler?

Of course you can, and often with satisfactory results. But so much depends on the type of boiler you may have. Just naturally anything designed especially to do a certain job, does that job especially well. All Burnham Boilers because of their particular design, give fine results with the attached burners. But the special Burnham Oil Burning Boiler has certain built-in features and automatic controls which you may feel are a distinct advantage.

3. How about the oil tanks, must I dig a big hole in my yard and a ditch for the pipes from it to the burner?

Not at all. Most States now permit the placing of tanks inside, near the boiler. It is always good to have an ample size tank so you have enough oil in reserve in case of emergencies.

4. How about the comparative economy of automatic as against hand-firing of fuel?

That's a hard question to answer. Hard because the price of coal and oil varies so in different localities. Put it up to your local man. He can give you definite figures. But here's a point you should bear in mind. The burning of oil is entirely automatic. No coal to shovel. No ashes to be taken care of. Your rooms need never get chilly because of the fire "going down" and having to wait for it to "come up," as it's called. Practically the instant the oil burner goes on, a full volume of heat is produced. You can have your house warmed the same at night as during the day at very little, if any, additional cost. That's because it costs less to keep a uniform temperature, than to let it down during the night and then have to overcome all that accumulated cold by running the fire harder and longer.

So even if you are located where coal may be somewhat cheaper, the comfort and practically entire freedom from attention required by oil, over-shadows any variance in cost.

5. Is there any danger of something happening and the oil leaking out all over the place?

How about your water system, are you afraid of that happening? Would you go without piped water through your house, just because now and again a leak happens? With the valving and automatic controls now used there is no more danger with the oil than the water. In fact less, because the oil isn't under any pressure at all until it reaches the flame nozzle that is inside the combustion chamber or fire box.

6. How often should an oil burner be serviced?

Asking your friends or neighbors, one will say once a month. Another every two months. Still another, two or three times a year.

Some car owners always change the oil every 500 miles. Others every 1000. The main thing seems to be, to do it systematically. As burners may vary in the attention needed, the concern you buy yours from can best answer the question. Even an electric ice box has to be looked after now and again. Still you wouldn't go back to the old cake-of-ice method would you? Isn't that after all your real answer?

7. Suppose something happens to the electricity or we can't get oil as soon as needed, can I temporarily burn wood or coal in your Special Oil Burning Burnham?

No you can't, because there is no provision for grates. But you can with a regular coal burning Burnham with an attached burner. But why borrow that trouble? How often do your electric lights go out for long enough a period to be any great hardship? As for the oil supply—that's no real problem these days, any more than it is to get gasoline. The oil companies are generally the gasoline ones. The same dependable service that supplies one, does the other. So why fuss about that?

The coal man might not be able to bring your coal right on the tick of the clock. So why think one is a gamble and the other a safe bet?

8. Does my cellar have to be filled with a network of pipes and wires?

Whoever put that thought in your head? Of course not. Present day installations are down to such a fine point there's practically nothing in sight. One thing sure, there's no coal scoop, pokers or ash cans standing around. What is an electric wire, or pipe or two in comparison?

9. How about the dirt? Is oil heat clean?

Why shouldn't it be—there are no ashes. No coal dust. No anything but a fire that burns up everything.

10. Is there any odor?

Not in the least, if the installation is right and the burner is kept reasonably clean. The first you would insist on anyway. The other you would see was done just because it is common sense. Besides, every once in a while there is a gas from coal. But you never heard of anyone going back to wood, just for that chance occurrence did you?

11. How about noise?

By noise you, of course, mean the burner. As for the mechanism of the burner itself — the electric driven fan mainly — that has been so perfected it is of no consequence. It is the noise of the burning flame that could be the most disturbing. But that's a thing of the past with the Burnham Boiler. Everything is built into the boiler. Everything, burner and all, is enclosed inside the jacket. The burner chamber is lined with a sound deadening material. Even the door. You can rest assured that any burner you may put in this sound-hushed Burnham will be so quiet you and your guests will never know when it is either on or off.

12. How about the jacket on the Burnham Oil Boiler, does it give as good an insulation as the asbestos cement applied directly to the boiler?

Better. Far better. That's proven by the coolness of the jacket. You can put your hand on it at any time. The Burnham jacket is heavily lined with a combination of insulating and sound deadening materials. So you

see, it is something more than mere looks back of the way Burnham jackets a boiler. It adds to looks, lessens noise, and it also spells economy.

13. Suppose anything happens to the insides of the Burnham Oil Boiler, how can anyone get inside the jacket to fix it?

Well, before the jacket is put on, the boiler and all the connections are first made. The jacket is no more than your overcoat is to you. If anything, it's easier to take your coat off than put it on. There's your answer about the Burnham jacket.

14. How can I tell how much room a Burnham Oil Burning Boiler will take up or how high it is?

All that you will find in our special catalog on the boiler. It is called "Automatic Cosy Comfort Heat." Gives you complete measurements and ratings. Send for it.

15. Suppose I have trouble with the boiler, who is going to make it right?

Go to the dealer you bought it from. If it's his fault, he will make good. If it's our fault he will take it up with us and you can depend on our being only too glad to see it's made right. We want our Burnham users satisfied. It isn't just being pleasant on our part. It's good business. Pleasant dealings and good business, happily make the best of teams.

16. Where can I buy a Burnham Oil Burning Boiler?

We don't sell direct. That is, from our factory direct to you. They must come through some dealer or contractor. If you don't happen to know any such in your section, just let us know and we will arrange all that for you.

It is distinctly to your advantage to have your heating boiler installed by an experienced dealer.

There are several oil burner makers who buy our boiler, equip it with their burner, and sell the complete unit. Boiler, burner, jacket and everything. Their reason for doing that is because the many superior points of the Burnham, insure satisfaction with their burners.

Questions on STOKER FIRING

1. Having concluded I want automatic heat, how shall I go about deciding whether to make it oil or stoker fired coal?

Well, that's not such a problem. One thing sure, however, if you ask your friends who have oil, they can't sing its praises enough. In turn, the same song of complete satisfaction will be sung by the stokerites. So why not ask us all the questions that are on your mind, and we will try to answer every one of them.

2. All right then, what I first want to know is the comparative cost of each.

In the last few years as the number of oil burners sold have increased, so has their cost decreased. The perfecting of stokers has been slower, and sales accordingly, so that in general, they have cost more. But they don't cost any more in the long run. Just why, have a notion some of your other questions will fully bring out.

3. My next question is, will a stoker save me money?

Yes, it will. If you have been burning coal, hand-firing it, there will be a decided saving. For example, take the usual size of Anthracite used in boilers, its cost varies from $12 to around $14.50 a ton anywhere within say 500 miles of New York. With a stoker you can burn a fine grade coal costing from 6 to 9 dollars a ton delivered. Don't know how many rooms your house has, or is to have, but let's say it requires 10 tons to heat it with hand-firing size coal. At $12 that would be $120. At $14.50 it would be $145. With the stoker it would cost from 60 to 90 dollars. A saving of from 55 to 60 dollars. Suppose, therefore, the first cost of the stoker is more than an oil burner, the saving on cost of fuel soon overcomes all that, and still you keep on saving that 55 to 60 dollars, year by year. Of course there is the cost of electricity same as with oil burners, and like them they have to be serviced, costing from 10 to 15 dollars a year.

4. But, you ask, isn't Oil cheaper than Coal?

Well, its average cost is just about the same as Anthracite at $12 to $14.50 a ton, depending on the locality.

5. How about the electricity used? Does a stoker take more?

No, it really doesn't. But supposing it did, you have that large saving on fuel cost to many times offset it. So that possible objection is out.

6. Some of my friends tell me a stoker takes up more room.

Yes, they do. That is to say they do, if you are comparing an oil burner that is Built-in the boiler—a direct part of it. Of course, then the whole outfit is only as big as the boiler itself. However, if you compare a Conversion boiler, one with the burner on the outside, then the new designed stokers take up but little if any more room.

7. Explain what you mean by a Conversion boiler.

It's a coal burning boiler converted to burn oil. More and more are being used. Tell you why. A good many folks know that if at any time the price of oil might be more than coal, or if for some other reasons they might not like oil, to burn coal they would have to buy an entirely new boiler. They would that is, if theirs was one of the Built-in kind. But if it was one of our Burnham Conversion Boilers, at a slight cost for changing the base, they can quickly shift from oil to coal, or from coal to oil.

8. That sounds good, but are Conversion boilers as economical for burning oil?

Yes, and no. Admittedly anything that is made to do any one thing the best it can be done, it's only logical it does it best. We make a Built-in boiler, and for years have been making Conversion ones, so that statement is made by us without any prejudice for one or the other. The difference in oil saved in one over the other, is however really not enough to bother about. Besides you always have the distinct advantage of being able to convert from one fuel to the other with our Conversion boiler.

9. How long would it take to convert one of these boilers from oil to coal?

Glad you asked that. Two men can easily do it in about a day.

10. What about the nuisance of ashes with stoker-fired boilers?

Frankly, that is the only possible objection to stokers. But after all, isn't it a rather over-emphasized one? Present day stokers automatically remove the ashes from the boiler and dustlessly deposit them in cans. It is no longer a messy, dusty job. Just remove the filled can and replace with an empty one. Sort of like setting out the milk bottles.

11. What about the work of filling the stoker hopper?

You don't need to. Present day stokers automatically bring the coal direct from your bin to the boiler. Fill the bin and the stoker does the rest. This automatic feature does add a bit to the first cost of the stoker. So if you are figuring your first cost with a very sharp pencil, then why not have the hand-filled hopper? No trick to do it. It's a lad's job, in fact. Fill it every 24 hours during the Winter, and every 3 or 4 days in the warmer months. That is, if you intend to use your boiler to furnish all year round hot water, as so many do nowadays.

12. Does a stoker need servicing as often as an oil burner?

No, it doesn't. A stoker requires no more attention than your ice box. Most stoker concerns have a yearly inspection service, which includes vacuum cleaning your boiler, going over the stoker, oiling and putting it in apple-pie order. The cost for this ranges from 10 to 15 dollars a year.

13. What happens if the electric current goes off?

Exactly the same thing as happens with an oil burner, or your refrigerator. It stops. But with a stoker the bed of coals will hold fire for 3 or 4 hours. You can also burn wood to tide over the interval. When an oil burner stops—well it just plain stops and that's that. Still, you know, after all nothing is *absolutely* perfect.

14. There's one more question nearly forgot. How about the noise?

There's practically no more noise with present day perfected stokers, than with an oil burner or an ice box. So now that you have asked all the questions you could dig up, let us remind you of this. We make all kinds of boilers for every place and purpose. Cast iron ones. Steel ones. Gas burning boilers. Boilers for oil, coal or coke. For more than half a century we have been making boilers. Doesn't it look to you as if we ought to know how best to make them?

Questions on Gas

1. Do you think gas is the coming fuel? There seems to be a lot of talk about it.

Frankly now, we don't claim to be any prophet. But one thing sure, it is fast on the gain.

2. What has started all the talk about using gas for home heating?

Well, in the first place, it is entirely automatic. Just as much so as the water in your bathroom. No filling of bins or tanks. No ashes. No odor. No bother. No noise. Simply a case of connecting up the pipe, and there the gas is, always ready for use at any time.

3. What is meant by its being entirely automatic?

Mostly it means, there are no bothers. Not only is the fuel supplied automatically, but the whole control of its burning and the amount of heat in your home is under full automatic control.

4. Do gas boilers cost more than coal or oil boilers?

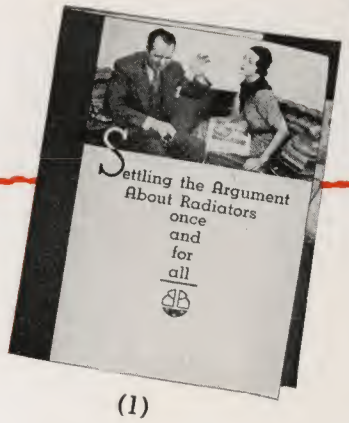
Gas boilers cost more than coal boilers because of their automatic controls, but cost less than a boiler-burner unit.

5. How about the cost of running them?

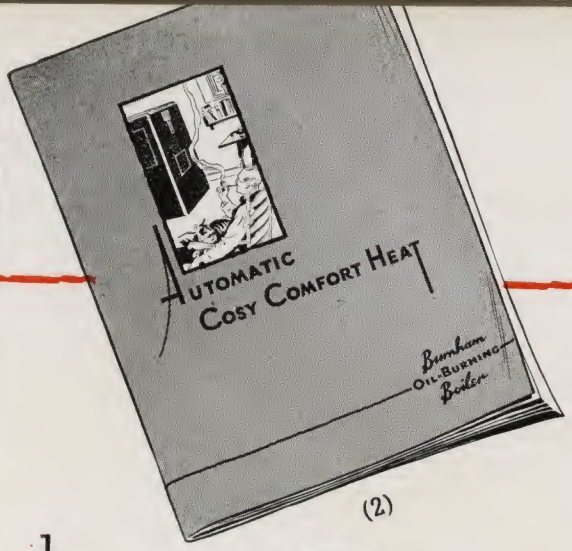
Glad you asked that question. The answer is, if you are in a section where there is natural gas they generally cost less to run than with coal or oil. The gas companies pretty much all over the country are making very attractive new rates for home heating. This makes it possible for many a one to use gas to whom the cost was prohibitive before.

6. Suppose it should cost somewhat more, is it worth it?

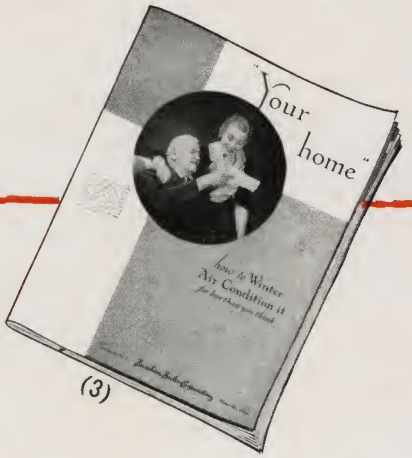
Don't know as we can exactly say what a thing is worth to you. So let us in turn ask you a question. Is it worth something to you to have an entirely botherless heat? One the fuel supply for which is always there, (whether or not you watch the coal bin or the oil tank). One that is entirely automatic in every way. One that has a pay-after-you use advantage. One that has no yearly servicing charge. One that is always on tap so to speak, at any time of the year, for as little or as much heat as you need. Also remember that 24-hour free service is available from your Gas Company should it ever be necessary. Assured comfort, entire convenience and a total freedom from care—don't you feel all these are worth something to you? So far as we are concerned, our company makes boilers for all kinds of fuel, putting us in an unprejudiced position. So we have tried to answer all your questions with absolute frankness.



(1)



(2)



(3)

These Books

With the idea of helping you to have contentment of mind and comfort of body from your heating, we prepared these five pieces of printed matter. Let us know if you want any of them, and we will gladly send them free.

1. Radiators

By all means send for this radiator printment. There is so much more to getting the right radiators and the right amount of heat from them, than you might think. There are plenty of illustrations and help hints. Am sure you will find things in it which if you don't happen to know, you will certainly want to. Might save money.

2. Automatic Cosy Comfort

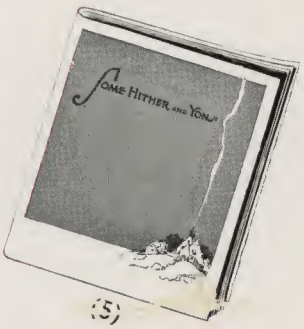
It has mainly to do with heating with oil. Told in a friendly, folksy way, quite as if one of your neighbors had dropped in to talk it over. Gives you a clear idea of exactly what automatic heat does for you, in assuring you contentment of mind and comfort of body. Has a number of illustrations you will find particularly helpful. By all means send for this one.

3. Your Home— How to Winter Air-Condition it

Be sure and send for this booklet. It gives you in a sincere, understanding way, various points and the different sides of the most important questions on Air Conditioning, as it applies to the comfort and health of your family.



(4)



(5)



(6)

Sent Free

4. Lest You Forget

It starts by putting a string around your finger, and then tells you how it will help you from forgetting. Help you with the things, the remembering of which, helps to get the most heat, from the least coal, with the least bother. Of course, if you are going to burn gas or oil it doesn't fit into your picture.

5. Hither And Yon

Funny name that. But the booklet itself is rather serious. It's about the serious subject of getting the right heat for your particular needs. It is told, however, in a friendly way. There are a dozen or more two-page chapters covering practically everything you should know before deciding on your heating.

It also tells you what to do after deciding, which in a way is quite as important.

6. Witching House

A delightful, personal, home-making experience as told by a man and wife. They bought an old Vermont Colonial farm house and fixed it up. To heat it was a vexing problem which *he* finally solved with *her* very important help. It's a truly charming human tale filled with unexpected help-hints. The way it mixes cards and cupboards, and heat and honey, is indeed illuminating.

IRVINGTON, NEW YORK

Burnham Boiler Corporation

ZANESVILLE, OHIO

BRANCHES

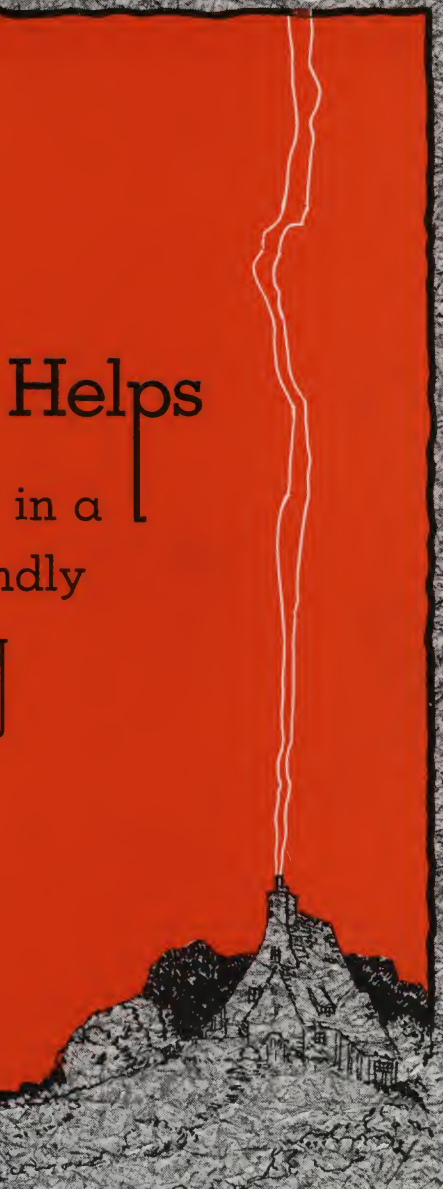
GENEVA, N. Y.
ELIZABETH, N. J.
CHICAGO, ILL.
CAMBRIDGE, MASS.
BALTIMORE, MD.
LANCASTER, PA.
LONG ISLAND CITY, N. Y.
PHILADELPHIA, PA.
PITTSBURGH, PA.
SPRINGFIELD, MASS.
QUEENS VILLAGE, L. I.

TORONTO, CANADA

SHANGHAI, CHINA

Burnham Home Heating Helps

told in a friendly way



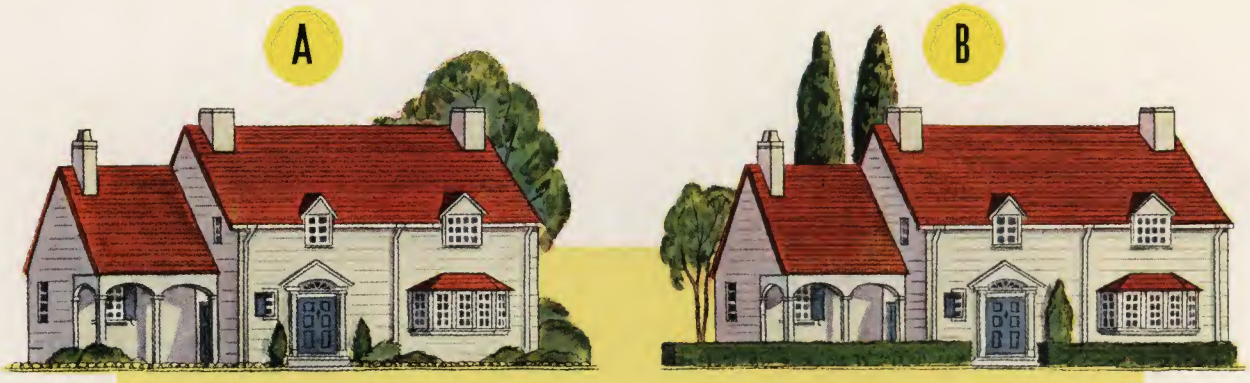
Burnham Boiler Corporation
IRVINGTON, NEW YORK



modern home building

DEPENDABLE MODERN BUILDING MATERIALS

Carey



THESE HOUSES LOOK ALIKE

but

"A" IS OLD FASHIONED

"B" IS MODERN

ALTHOUGH houses "A" and "B" look as much alike as peas in a pod, there is a vast difference in them . . . a difference in first cost; in comfort; in upkeep; in investment value.

"A" is a good house by old-fashioned standards. It was built of the best materials known before the development of such products as The Philip Carey Company has perfected in its scientific research laboratory.

"B" is the modern house—built at low cost to give modern comfort and freedom from maintenance worry and expense. It is easy to heat; free from drafts; requires the minimum of fuel; has a roof and siding that will last as long as the building and never require painting.

"A Home of Our Own"—this is the worthy ambition of the vast majority of American families. A good home is the most satisfactory material possession one may acquire. It is a daily source of happiness and contentment; gives the owner a feeling of stability and permanence, as well as a standing in the community.

A good home, properly built of modern materials and bought at a price in keeping with the family income, is the soundest of all investments. Money invested monthly or weekly in a home is the one form of saving that can be most easily adhered to and in which enjoyment may be found in the sacrifices made. Untold thousands of families have made their start to financial independence through home ownership.

To buy or build a home that will meet your expectations and prove a good investment in the end, requires careful consideration of several fundamentals: (1) Inside plan that will suit the needs and contribute to the comfort and convenience of the

family; (2) Outside design that will present an attractive appearance and enhance value; (3) Sound construction by a reliable builder; (4) Long-life modern materials that will protect your investment through permanence and low maintenance costs.

To make sure of these basic essentials in your new home, it will pay you to engage the services of a competent architect. His experience will insure a home that will meet your requirements; his advice will guard you against mistakes and save you many future regrets.

There is one factor entering into home building that must be given more careful consideration today than ever before—that is—*modern* building materials. We emphasize the word *modern*. For the development in building materials has been revolutionary in the past few years, particularly in the manner in which they affect comfort, permanence and low upkeep.

Quietly, in the secrecy of the research laboratory, Carey scientists have been developing *new* building materials. Some of these modern Carey materials add new comforts—comforts and economies you cannot afford to be without—for they return in fuel savings more than they cost. Other Carey materials pay their way in fire safety, lower-cost insurance, in elimination of painting, in lifetime service. *All* Carey Products reduce upkeep in the extra services they render.

Now is a good time to build a home. Labor is plentiful. Building materials may be had at attractive prices. Under the new N.H.A. legislation, financing may be arranged under the most favorable terms. Build your home now—make sure of permanent satisfaction and low upkeep by specifying Carey Dependable Products.

Tell your architect or builder you wish to use Carey Products. He will be glad to specify them, for the good reputation of Carey Products is the result of sixty-five years of continuous experience in the manufacture of dependable building materials.

It is the purpose of this book to show the advantages you can build into your home by using modern products. Carey Dealers and Branch Offices are eager to serve you with information, prices and materials.

the modern home has PLANNED COMFORT AND ECONOMY



MATERIALS - DESIGNS AND METHODS
described in this book

roofs	*Careystone Asbestos-Cement Shingles, the permanent fireproof roofing that never needs painting . . .* *Carey Asphalt, Individual Shingles—colorful, fire resisting . . .* *Carey Cork-Insulated Shingles—combine roof and roof insulation—at roof cost only . . .* *Carey Strip Shingles—attractive, economical . . .* *Carey Rocktex (Rock Wool) Home Insulation—for year 'round home comfort.*
floors	*Carey Building and Sheathing Papers for use under flooring.*
side walls	*Careystone Siding—in® shingle and Clapboard units. Fireproof—never requires paint.* *Careystone Sheathing for use in dormers, panels and other exterior wall areas.* *Careystone Wallboard for interior walls, ceilings, partitions.* *Carey Rocktex (Rock Wool) insulation for side walls.* *Carey Building and Sheathing Paper under siding.*
partitions	*Careystone Scored Sheathing—economical tile effect—for kitchen, breakfast room and bathroom walls.*
foundation	*Carey Damp-Proofing and Waterproofing Materials for basement walls . . .* *Careystone Wallboard—applied to basement ceiling for fire stop.*
heating system	*Careycel Insulation for hot water and steam heating systems . . .* *Carey Tank Jackets—for hot water tanks . . .* *Carey Pipe Covering for cold water lines, soil pipes, etc.* *Careycel Insulation for Air Conditioning Ducts . . .* *Careyduct—the all asbestos Air Conditioning Duct.*
sidewalks and drives	*Carey Expansion Joint—to prevent unsightly cracks in concrete work.*
bathroom cabinets and accessories	*MIAMI-CAREY Cabinets—combine modern design with utility and rugged construction—a complete line of accessories.*

other people look at roofs first ...and so shall we



NEXT time you walk or drive down the street, notice that you see the *roof* of a house before you are conscious of any other part.

A proper roof is like a hat that supplements and completes the attire of a well-dressed person. Because the roof is so conspicuous, it should be attractive and in complete harmony with the style and color of the home. Because of the service it must render, it should be of a quality about which there can be no question.

The roof has a responsibility next in importance to the foundation. It must protect everything under it, from the furnishings to the building itself. The roof, therefore, is NOT the place to practice "cost cutting" when you build.

Through years of research and experience, Carey has developed a line of roofs from which you may select the one that will best harmonize with the architecture of your home. Carey roofs are available in a wide range of prices to suit any building budget. But regardless of which Carey roof you choose, you are sure of maximum service for every dollar invested. Extra value is a fundamental of every Carey roof.

★

TO THE LEFT—reproduction of a direct color photograph of an attractive white brick Colonial home—roofed and protected for all time with Careystone Asbestos-Cement Shingles.

ROOFS THAT COVER YOUR INDIVIDUAL NEEDS



Careystone

ASBESTOS-CEMENT SHINGLES

Made of the imperishable materials, asbestos fibre and Portland cement, Careystone Shingles possess the peculiar property of increasing in toughness upon exposure to the elements. They are fire-proof, wear-proof and rot-proof—permanent as stone and, in appearance give an exact reproduction of wood grain—a beautiful roof that never requires painting or other upkeep.



Carey

CORK-INSULATED SHINGLES

Provide a durable, storm-proof roof plus insulation against heat and cold—at a cost very little above that of ordinary asphalt shingles. Where roof insulation is desired, this shingle affords considerable economy, since no additional labor or material is required in laying. The Cork-Insulated Shingle makes a finished roof of pleasing appearance, with deeper shadow lines due to the extra thickness.



Carey

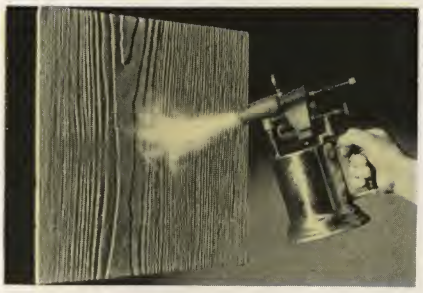
ASFALTSLATE SHINGLES

Famous for their long wearing quality and natural beauty. They are proof against ordinary fire risks—low in upkeep, as they never require painting. Asfaltslate Shingles, both individual and strip, are manufactured over a base of tough rag felt, thoroughly saturated and coated with asphalt. To this is applied a layer of colored mineral granules, providing a durable wearing surface in natural colors—a roof of lasting beauty.

why many builders will have nothing else but

Careystone

ASBESTOS-CEMENT SHINGLES



CAREYSTONE WILL NOT BURN. The searing flame of the blow torch can find nothing in this shingle that will ignite. You owe yourself the protection from outside fires afforded by this modern roof.

You wouldn't think of building a home without a permanent foundation. Can you afford to build without a permanent roof?

A permanent roof reduces your upkeep and repair expense; insures you against costly leaks; against fire hazards; lowers your insurance rates to the minimum; saves you the cost of ever having to rip off old shingles and pay for a new roof. Then, too, there's a feeling of security in living under a roof you know is fireproof—a roof on which sparks, embers, even burning brands fizzle out harmlessly.

All these advantages—these savings—are yours to enjoy when you roof your home with Careystone Asbestos-Cement Shingles. Once laid, your roof worries are over.

All Careystone Shingles, with the exception of the French method, have the appearance of wood shingles, the texture being an authentic reproduction of wood grain set in everlasting Portland cement and asbestos fibre. By a scientific process, these two lifetime materials are combined under great pressure, forming a shingle that will last as long as the building.

Careystone Shingles "pay their way" in permanent service and in elimination of painting and other upkeep expense.





Budget and Architecture Meet on a Common Ground with

Carey

ASFALTSLATE SHINGLES

CONVENTIONAL in design, the Carey Asfaltslate Shingle is adaptable to many architectural treatments . . . assures a roof of long life and distinctive beauty at reasonable cost.

Made especially rugged and substantial to insure extra years of trouble-free service. A layer of colored mineral granules provides a beautiful and durable wearing surface. Full three thickness coverage assures maximum roof protection.

Asfaltslate Shingles are proof against all ordinary fire risks, such as flying sparks from chimneys and burning brands from neighborhood fires. You protect your home against fire, weather and time, when you roof with Carey Asfaltslate Shingles.

THE CERAMIC GRANULES used in the manufacture of Carey Shingles are made by applying a high-temperature, fusible, colored glaze to a mineral granule base and firing the glaze into the surface of the granule at a temperature of around 2000 degrees F. The mineral pigment colors and the firing conditions are very similar to those used in firing the decorative pattern on china or porcelain dishes. The color of the granule is just as permanent. It cannot fade or wash off.



Carey Cork-Insulated Shingles

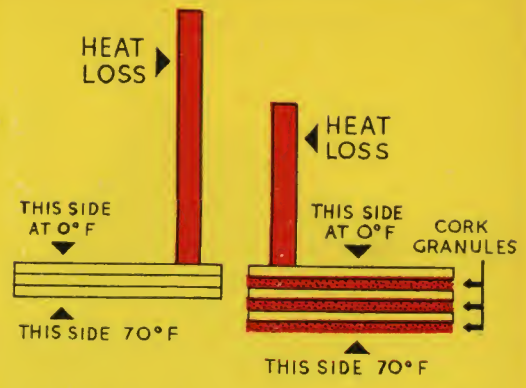
GIVE TWO VALUES AT ONE COST

THIS is the only asphalt shingle with outside mineral surface for weather protection; cork underside for insulation. The cork layer acts as a barrier to heat and cold; makes the home several degrees cooler in summer and correspondingly warmer in winter.

This effective roof insulation is automatically applied when the roof is put on, eliminating the extra cost of material and labor involved when separate roof insulation is used.

Fuel Savings Pay the Bill—A study of actual roof conditions shows that for a roof of average area (15 squares), with an average difference between indoor and outdoor temperature of 40 degrees F., the home owner who burns fuel at $9 per ton can save during a single heating season the difference in cost between an ordinary asphalt shingle roof and a Carey Cork-Insulated roof . . . and these savings continue year after year.

Carey Cork-Insulated Shingles are approved by Underwriters' Laboratories—assure a beautiful and distinctive roof; long, dependable service.



A GRAPHIC REPRESENTATION of the heat loss* through three layers of Carey Large Individual Shingles (5 inches exposure and spaced ¾ inches apart) compared with an identical application of Carey Cork-Insulated Large Individual Shingles, under the same test conditions, namely, a temperature difference of 70 degrees F. between the inner surface and outside air.

*B.T.U. heat loss per square foot, per hour.



Three thicknesses of cork provide insulation, and this added thickness makes a more attractive roof with deep shadow lines.



YOUR CHOICE OF HARMONIOUS



Slate Green
Asfaltslate



Tile Red
Asfaltslate



DEPENDABLE, waterproof protection will always be the first essential of a good roof.

Yet the roof must satisfy another important requirement—appearance. Because the roof is the largest single area in the house and the dominant feature of its exterior, it should be in complete harmony both with the style of architecture and the color of the building.

Today, more than ever before, outside appearance is an important factor in home value. Home buyers want a roof that emphasizes the character of the home—that gives it dignity and charm. Here, color plays a vital part.

Carey Shingle colors have been developed through years of careful study and experience in





The Emeralblend—one of the attractive blends now available in the Carey Asphalt Shingle line. The others are Red, Harvest, Russet and Green Blends and Verdeblend.

ROOF COLORS THAT ENDURE



The Careystone Scotch American Shingle. Note the natural looking wood grain and the effect of individual shingles laid in random widths with staggered butts.

satisfying individual preferences of home owners and the rigid requirements of architects.

Carey Shingles are available in an adequate range of nature's own colors—warm reds, cool greens and beautiful blended tones, as reproduced on these pages. These colors harmonize with architecturally correct home exteriors and through combination of colors, an almost endless variety of effects may be secured, to meet the demands of any individual taste.

Carey Shingle colors are permanent. They cannot fade or wash off when exposed to the weather.

Carey will be glad to supply you with samples, so you may try them in various combinations and make sure your final selection will be right.



Georgian Red
Careystone

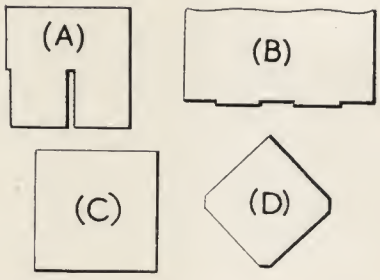
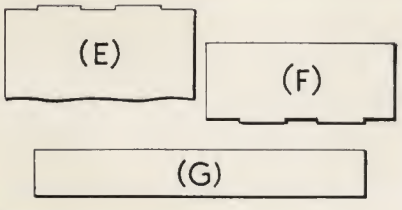
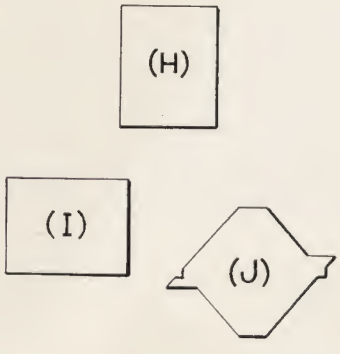
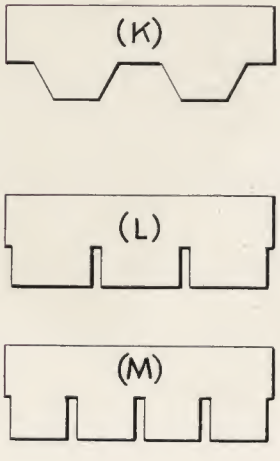


Weathered
Brown



Tudor Black
Careystone

TABLE OF DESIGNS AND METHODS

GROUP	SHAPE	NAME	SIZES, IN.	EXPOSURE, IN.	HEADLAP, IN.	WEIGHT PER SQ., LB.	UNDERWRITERS LABEL
Careystone ASBESTOS-CEMENT SHINGLES		(A) Duplex Shakes No. 35	16 x16	7	9	465	Class "A
		(B) Scotch-American No. 20	12 x24	9x20	3	260	Class "B
		(C) Scotch No. 30	16x16x3/16	12x13	3	290	Class "B
		(D) French No. 70	16x16x5/32	13	3	260	Class "B
Careystone ASBESTOS-CEMENT SIDING		(E) Old Colony Duo Edge—No. 210	12 x24	10½x24	1½	180	
		(F) Duo "8"—No. 220	9½x24	8x24	1½	190	
		(G) Colonial Clapboards	¼x9x96	7	2	325	
ASPHALT INDIVIDUAL SHINGLES *Plain Back †Cork Back		(H) Asfaltslate	12 x16	5	6	325* 345†	Class "C
			9 x12¾	4	4¾	253	Class "C
		(I) Careylok (Standard)	12 x16	10	2	130*	Class "C
		(I) Careylok (Extra Heavy)	12 x16	10	2	162*	Class "C
		(J) Careylok (Hexagonal)	16 x16		2½	130* 140†	Class "C
ASPHALT STRIP SHINGLES *Plain Back †Cork Back		(K) 2 Tab, Hexagonal	11⅓x36	4⅔	2	167* 177†	Class "C
			12⅓x36	4⅔	3	186*	Class "C
			14½x36	4⅔	5⅙	225*	Class "C
		(L) 3 Tab, Square Butt	12 x36	5	2	210* 215†	Class "C
			15 x36	5	5	270†	Class "C
		(M) 4 Tab, Square Butt	10 x36 12½x36	4 4	2 4½	210* 266*	Class "C Class "C

ANSWERS TO OTHER ROOFING PROBLEMS

Roll Roofing—To meet the demand for good low-priced quickly applied roofings, Carey offers a complete line of ready-to-lay Roll Roofings—in various weights and finishes—in a price range to meet every need . . . from the smallest temporary shed to the more permanent building. . . .

Roll Roofings in colorful mineral surfaced finishes for use on garages and other buildings where appearance is important. . . .

Other types of Roll Roofings in black finish for jobs where protection is the primary consideration.

Carey Roll Roofings are packaged in rolls containing sufficient material to cover 100 square feet of roof surface, allowing for laps. Nails and cement are packed inside each roll.



BUILDING PAPERS AND FELTS—Carey Waterproof Building Paper keeps out dampness, grit, wind—assures a cleaner, more comfortable home. Available in various types and weights to meet practically every need in modern home construction.

Built-Up Roofs—For flat roofs where shingles are not practical, Carey Built-Up Roofs are recommended. If your home plan calls for flat roof construction, be sure to specify these time-tried Carey Built-Up Roofs.

As the name implies, these roofs are built up, layer on layer, to meet the requirements of each job. Your architect or builder will be glad to determine the correct specifications for your building.

For more than fifty years, Carey Built-Up Roofs have been protecting many of America's largest commercial buildings . . . evidence these products will serve you well.



those wh



Careystone
OLD COLONY DUO-EDGE No. 210

This is another double edge unit, made with thatch butt on one edge and wave line on the other. When laid with one edge exposed, it presents the distinctive broken lines of thatch butt shingles laid in random widths. By exposing the other edge, a very pleasing wave line is secured. A unique treatment may be achieved by using both the wave line and thatch butt exposures on the same building.



Careystone
DUO "8" SIDING

This is a double edge unit, made with thatch butt on one edge and a straight line on the other. May be laid with either edge continually exposed, or alternated. Affords almost unlimited opportunity for planning distinctive exterior wall treatment. Ten or more separate and unusual patterns may be developed by combining this unit with the wider Old Colony Siding.

In the manufacture of this siding, special care is given to the arrangement of the grain—to bring out the effect of random width, individual shingles.

ıre alert to Modern Developments in Home Building Materials say . . .

BEFORE YOU BUILD . . . CONSIDER

Careystone

ASBESTOS-CEMENT SIDING

When you specify Careystone Siding, you protect your building with a material that is fireproof and wear-proof—impervious to moisture—as permanent and unburnable as stone itself.

Can you imagine a more desirable material for protecting the outside walls of *your* home?

Available in a variety of shingle styles and in the time-honored Colonial Clapboards, Careystone Siding is perfectly adapted to many popular types of architecture. It may be had in styles and colors to meet every architectural requirement or personal taste.

Careystone Siding in Duck's Back White—See for yourself this newest development in pure white. It is whiter than white paint and stays white even during a soaking rain. Protects your building like a duck's back keeps its downy under coat dry and warm.

Careystone Siding "pays its way" in beauty, permanent service and freedom from upkeep.

Consider These Advantages of

Careystone

ASBESTOS-CEMENT SIDING

1. Low first cost
2. Distinctive, beautiful appearance
3. No Upkeep Expense
4. No Painting required
5. Fireproof and wear-proof
6. Makes the home warmer in winter
7. Cooler in summer
8. Will not rot or deteriorate
9. Will not curl
10. Termite Proof

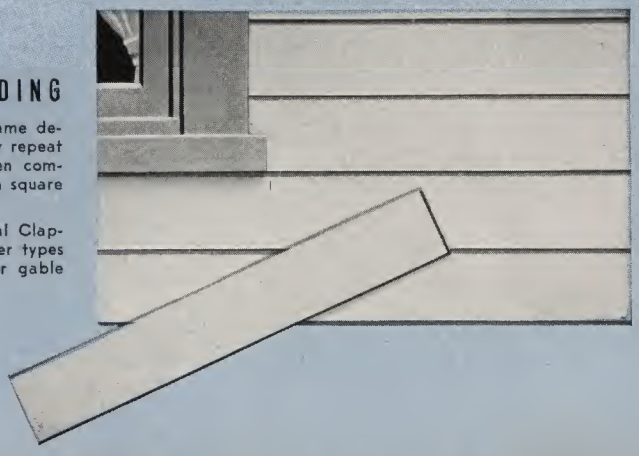


Careystone

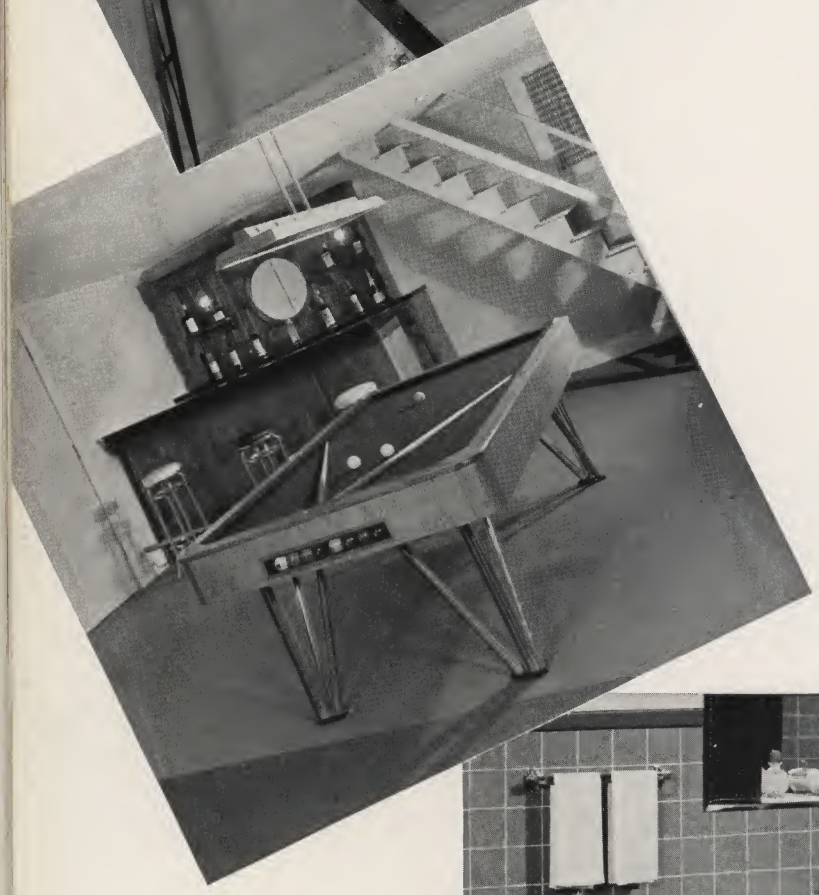
COLONIAL CLAPBOARD SIDING

Readily adaptable to almost every type of frame design. Its outstanding merit is substantiated by repeat orders for a new housing project which, when completed, will use approximately one-half million square feet.

A pleasing contrast is achieved when Colonial Clapboard Siding is used in conjunction with other types of Careystone Siding Units, in upper story or gable end treatment.







Careystone

ASBESTOS-CEMENT WALLBOARD

Made of asbestos fibres and Portland Cement. Ideal for use on walls, ceilings, panels and partitions. Can be nailed (without drilling) direct to wood studs. Furnished in an attractive buff color which makes a neat finish, or may be painted or papered. Makes an excellent fire stop when used on basement ceiling. Available in 3/16", 1/4" and 3/8" thicknesses and in standard size sheets 48"x48" and 48"x96".

CAREYSTONE SCORED ASBESTOS-CEMENT WALLBOARD

Is the same base material described above, except that each sheet is scored in 4"x4" squares to provide a tile effect. Widely used for lower sections of walls in kitchens, bathrooms, breakfast rooms. Makes a beautiful tile appearance at a great saving in labor and material cost. Furnished in maximum size sheets 48"x96".

CAREYSTONE FLAT ASBESTOS SHEATHING

A board made of asbestos and cement—fireproof and weather-proof—suitable for interior and exterior use. Becoming increasingly popular for use in place of stucco in dormers and other places in home construction. Furnished in the white, natural color of the materials from which it is made. The color is permanent and will not discolor upon exposure to the elements. May be drilled and sawed with ordinary tools. Available in any size up to and including 48"x96", in thicknesses from 1/8" to 2", inclusive.



Typical installation of Careystone Scored Wallboard. Finished on the job by your painter.

DRY, HEALTHFUL, USEFUL BASEMENTS



CAREY DAMP-PROOFING AND WATERPROOFING

Basements not properly protected against the seepage of ground water become damp and unhealthy. To prevent this—to make sure your basement will be as dry and healthful as your living room, specify Carey Waterproofing Materials in your new home.

CAREY PERCOPROOF COATING

This compound, applied to the outside wall, penetrates the pores and seals out the ground water, assuring a dry basement. Percoproof comes in cans ready for use. Easily applied by unskilled labor. Must be applied to the outside of the wall only —preferably while the building is being erected.

CAREY PLASTIC WATERPROOFING COMPOUND

This is a fibrous black cement which is troweled onto the outside of the foundation walls, forming a tough and thick adhesive layer. Used where building is in low, heavy or soggy ground, where greater protection is needed than is afforded by the liquid Percoproof Coating. Applied to outside of basement wall only.

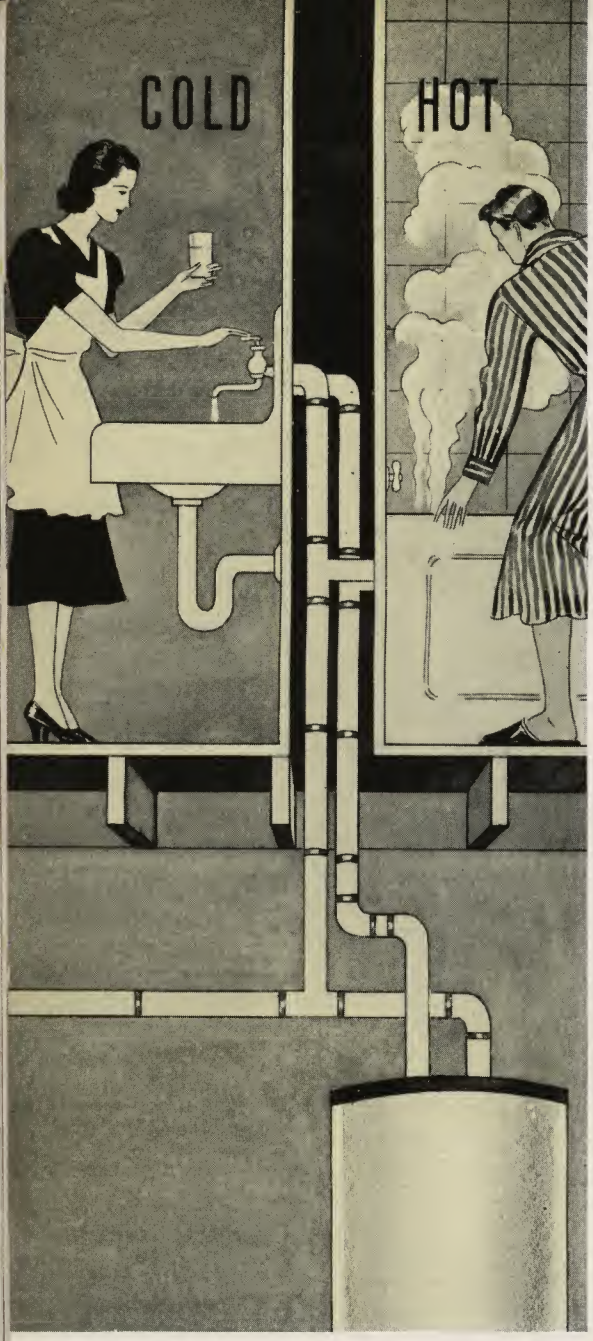
CAREY PERCOPROOF PLASTER BOND

When moisture soaks through from the outside of concrete, brick or hollow tile walls, it often causes ugly stains and cracks in the plaster, sometimes causes the plaster to fall. The use of Carey Percoproof Plaster Bond prevents the penetration of moisture. Applied directly to the wall, it penetrates the pores, sealing them against dampness. Percoproof Plaster Bond is of a thin, paint-like consistency and comes ready to apply with a brush, without the addition of solvents. It leaves the wall in its original roughness so that the plaster bonds firmly and permanently.









Carey INSULATIONS F

UNCOVERED steam or hot water pipes act as radiators. They waste heat in basement. hollow walls and other places where heat is not needed.

USE CAREYCEL FOR YOUR HEATING SYSTEM

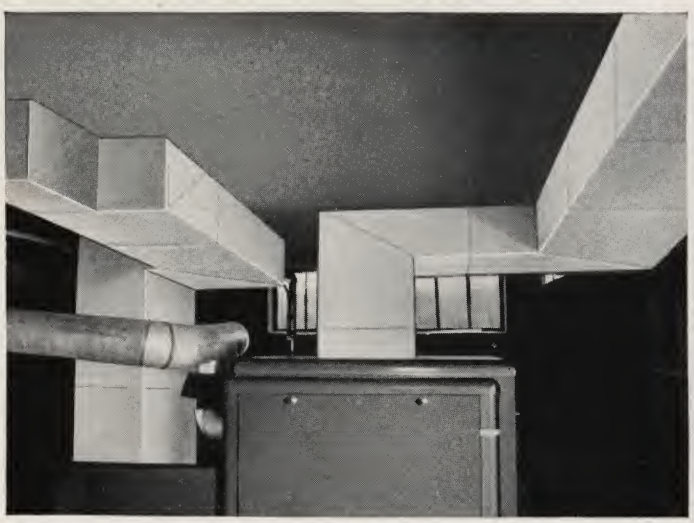
Careycel Asbestos Insulation is an exclusive, patented Carey Product, developed especially for hot water and steam heating systems. Impartial tests, made by a leading testing laboratory, demonstrated a 30% reduction in heat loss over the air cell type of covering ordinarily used. Put Careycel over all pipes leading from boiler to radiator; cover boiler with Careycel Asbestos Blocks. The savings in fuel will pay for the insulation and continue to pay you dividends in fuel saved year after year.

A CAREY TANK JACKET KEEPS HOT WATER HOT

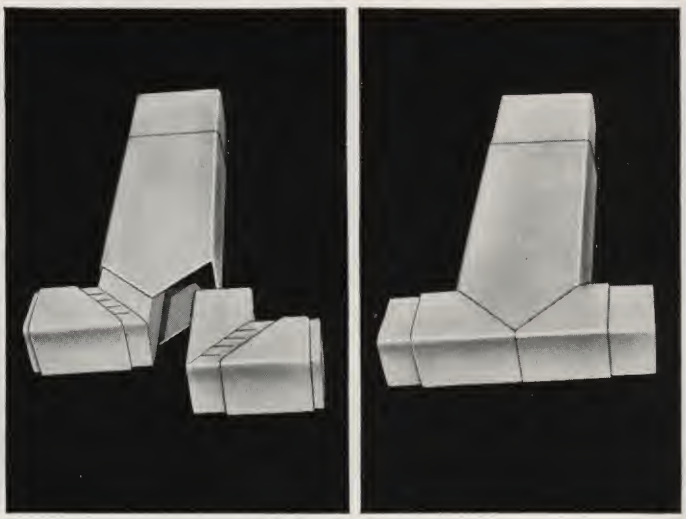
Cover your hot water heater with a Carey Tank Jacket. The water will heat quicker and stay hot longer. The pipes leading from water heater to kitchen and bathroom allow the hot water to cool. Cover these pipes with Careycel Insulation and keep the water hot, right up to the faucets. This will save you money on water and gas bills; give you more hot water when you want it.

CAREY PERFECTO PIPE COVERING FOR COLD WATER LINES

Cold water lines usually run parallel to hot water lines through the walls to bathroom and kitchen. These pipes are warmed by the adjacent hot water pipes and it is usually necessary to run the cold water for some time to get it cool enough to use. Cover your cold water lines with Carey Perfecto Covering—have cool water right up to the faucets —reduce your water bills.



Note the neat finished appearance of this typical residential installation of Careyduct.



Illustrating simplified method of constructing fittings from standard Careyduct parts.

FOR THE HOME

ELIMINATE NOISY WASTE PIPES

You know how objectionable it is—and sometimes embarrassing—to hear waste water gurgling through the soil pipes between the partitions. This is easily overcome by insulating the soil pipes with Carey Perfecto Woolfelt Pipe Covering. Make Carey Pipe Covering a part of your heating and plumbing specifications. The work must be done before walls are closed and plastered.

ELIMINATE SWEATING PIPES

Like many home owners you probably wish to make use of your basement as a recreation room, work shop, or laundry. Be sure to cover cold water lines with Carey Perfecto, the non-sweat insulation. It will eliminate dripping from pipes.

SPECIFY CAREYDUCT FOR YOUR AIR CONDITIONING SYSTEM

If air conditioning is included in your new home, be sure to specify Careyduct—the modern asbestos insulated duct. Careyduct is fireproof; permanent; will not rust or decay; hushes fan noises; insures uniform high efficiency in the whole duct system. Size for size, Careyduct is much cheaper than insulated metal. Easily erected; easily decorated.

★

CAREY EXPANSION JOINT PREVENTS UNSIGHTLY CRACKS

Variations in temperature cause concrete work to expand and contract. To prevent breakage and cracks due to this expansion and contraction, specify Carey Elastite Expansion Joint to be used in all concrete work about your home. Carey Expansion Joint is available in two types:

A. Standard Asphalt Joint consisting of two layers of felt between which is interposed an asphaltic composition.

B. A sponge rubber type of joint that is resilient. When compressed by the expansion of concrete, it will not extrude.





Unsightly cracks in concrete driveways are a thing of the past when Carey Elastite Expansion Joint is specified.



Rocktex Loose Wool installed in walls of new construction



Rocktex Granulated Wool being installed in open attic



Rocktex Bats being installed in open attic



Rocktex Bats being installed in walls of new construction



Rocktex being blown over top floor ceiling



Rocktex being blown in side walls of old home

Carey ROCKTEX

HOME INSULATION

Keeps Heat Inside in Winter
Keeps Heat Outside in Summer
Saves up to 30% on Fuel Bills
No Upkeep Cost

CAREY ROCKTEX is the modern Rock Wool Home Insulation. A 4-inch thick blanket of Rocktex installed in the walls and ceiling of your home is as efficient in stopping the flow of heat as a solid brick wall about five feet thick.

Fuel savings are definite because Rocktex stops the loss of heat that costs you so much to provide. Rocktex also effects important savings in reducing the size of the heating unit required to heat an uninsulated building. The saving in cost of the heating plant has, in many cases, paid for the insulation.

HOME INSULATION . . . A M

Since Carey Rocktex reduces fuel consumption up to 30% or more, it is an important item in household economy. In many cases, it will go far toward paying the taxes on the property.

Carey Rocktex Insulation eliminates drafty rooms, cold corners and cold floors in winter. By maintaining even temperatures, it reduces rapidity of air change in the home, thereby diminishes evaporation of moisture in the air and helps to conserve the proper humidity so essential to health.

Carey Rocktex gives you increased fire protection. You don't have to push your furnace so hard in cold weather; thus you eliminate one of the greatest fire hazards. Rocktex eliminates lath marks and unsightly dark streaks on ceiling and walls. You don't have to redecorate so often, another important saving. Rocktex also increases property value. A Rocktex Insulated home is more livable—rents to better advantage . . . sells at a substantially better price.

Carey Rocktex is manufactured from mineral materials; therefore is permanent. It is fireproof . . . water repellant . . . odorless . . . highly efficient . . . light in weight . . . will not rot or decay . . . outlasts the building.

Carey Rocktex is available in forms for easy application in any type of building, old or new. Insulate with Carey Rocktex—it returns to you in savings *more than it costs.*

REGARDLESS OF WEATHER CONDITIONS INSURE YOURSELF OF COMFORT

NO MORE COLD, DRAFTY FLOORS.



IF IT'S WINTER YOU WILL HAVE FUEL SAVINGS UP TO 30%

You will have no more of those "Hard to Heat" rooms. Your top floor rooms will be as comfortable as your lower floor rooms. Heat that ordinarily would be lost stays inside where it belongs. Floor and stairway drafts will be practically eliminated. Children can play on the floor without fear of usual colds.

DERN NECESSITY FOR COMFORT AND ECONOMY





IF IT'S SUMMER YOUR HOME WILL BE UP TO 10 DEGREES COOLER

Sleeping rooms which are unbearably hot will be comfortable. You will be assured a good night's sleep even in the hottest weather. Your top floor will be within two to three degrees of the lower floor. Returning home after a hot day in the office or shopping you will find your home refreshingly cool.

NO MORE BAKE-OVEN BEDROOMS.

MIAMI *Glorifies* THE AMERICAN BATHROOM

OF ALL the fixtures and appointments that go into the Modern Bathroom, none play so important a role in providing beauty, distinctive charm, as well as utility, as the Cabinets and Accessories.

Bearing this in mind, Miami Engineers and Designers have spent their time and talents creating a line of Bathroom Cabinets that has become popularly and aptly known as "America's Finest."

Miami Cabinets are backed by more than seventeen years manufacturing experience. They are ruggedly constructed of finest quality, heavy materials and carefully finished to retain their beauty and brilliance indefinitely and to render lifetime service under hard use. Electric lighted cabinets are wired at the factory.

The Complete Line includes a wide variety of exclusive, distinctive models . . . ranging from luxurious cabinets and ensembles for the stately mansion to simple cabinets for the modest cottage. All are Miami quality throughout.

A few models are shown here. Should you desire more detailed information, or if you have a bathroom cabinet problem to be solved, write to us.



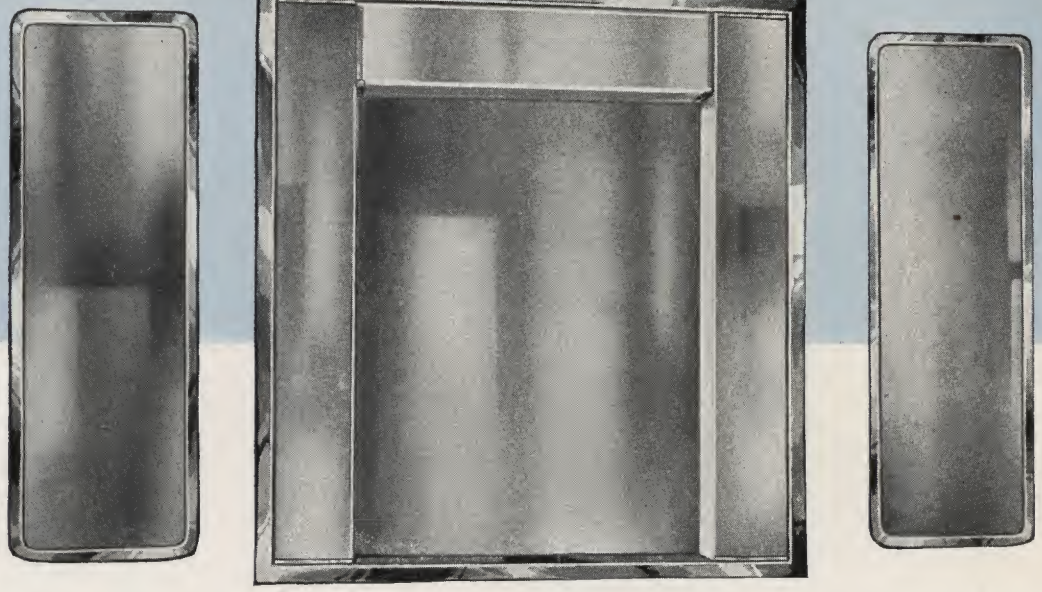
The IMPERIAL—Here is MIAMI'S latest development in Modern Bathroom Cabinets—an exclusive, distinctive Deluxe Model for those of discriminating taste. The frame around the entire cabinet is *brass, chromium plated.* Spacious side cabinets, one on each side of the large recessed mirror, have chromium framed mirror doors swung on *brass, chromium* plated piano-type hinges. Cabinets are finished inside in white *Crystal Snow* and are equipped with three glass shelves, stainless steel shelf supports and tooth brush holders. The shelf under the center mirror is white *vitrolite.*

The inside walls projecting outward from the center mirror are faced with mirrors that match the large center mirror. Two light bulbs concealed behind the opal flash-glass panel at top of the center mirror provide perfect reflected light for shaving or dressing the hair. Regular mirrors are "A" quality silver, *copper backed,* guaranteed for five years against silver spoilage. The new rose (or flesh) colored mirrors may be had if required.

The overall size is 32" x 32⅜"; the wall opening, 31⅛" x 31½" x 4⅜"; the center mirror measures 18" x 27½"; the two side mirrors, 5 9/16" x 30 1/16"

MIAMI CABINET DIVISION • THE PHILIP CAREY COMPANY • MIDDLETOWN, OHIO

LOUIS XIV
MIRROR-CABINET
ENSEMBLE



NEW, DIFFERENT AND DISTINCTIVE

The *Louis XIV* unit is not merely a bathroom cabinet, but an ensemble of beautiful bathroom furniture. The center unit consists of a large recessed mirror flanked by narrow full length mirror panels that extend forward. There is no cabinet behind it. The frame around the entire center unit is *brass, chromium plated.* The mirrors are genuine "A" quality plate glass, *copper backed,* guaranteed for five years against silver spoilage. The center mirror may be either the regular "A" quality silver mirror or the new rose (flesh) color. The small side mirror panels on the center unit are optional as to color—either rose (flesh), blue, gun metal, green or regular silver.

MIAMI LOUIS XIV MIRROR-CABINET ENSEMBLE

The lights, concealed behind the white ground glass panel at the top of the center unit and behind the two narrow side mirrors, are arranged so as to reflect proper illumination to the center of the mirror. Light is also reflected out into the room through the top front panel.

The two side cabinets are finished inside in Miami white *Crystal Snow,* guaranteed not to retain a stain nor to discolor with age. Three glass shelves are furnished with each cabinet. The cabinet doors, hung on chromium plated brass piano type hinges, are fitted with mirrors set in brass, chromium plated frames that match the frame of the center unit. These mirrors are the new rose (flesh) color; regular silver is optional. The wall opening for the center unit is 28½"x30¾"x4⅜"; the overall size is 29⅛"x31⅜"; mirror, 20"x26". For the side cabinets the wall opening is 24½"x8¼"x4¼"; the overall size, 10¼"x28¼"; mirrors, 10"x28".

MIAMI DUBARRY MIRROR-CABINET ENSEMBLE

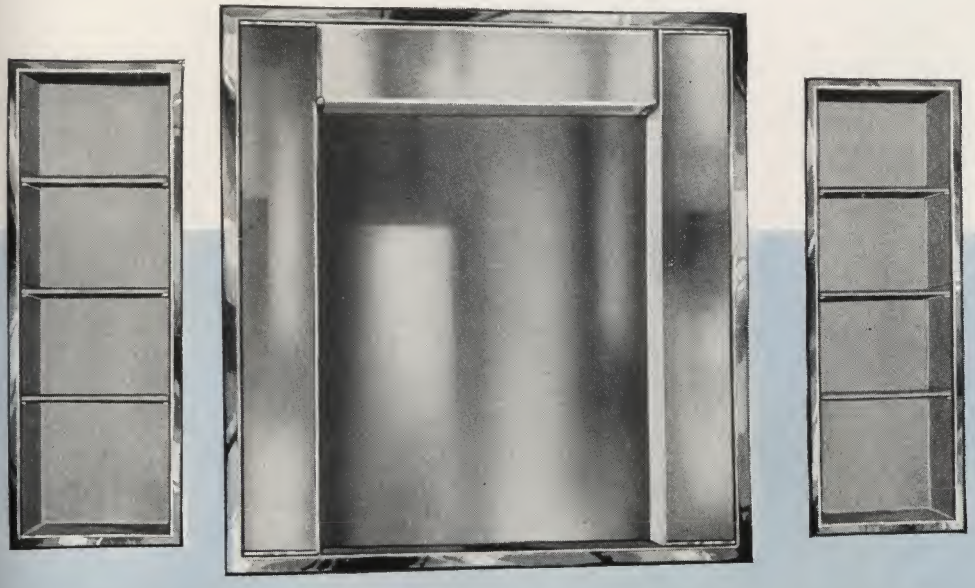
Lifetime beauty today—always—colorful, brilliant, modern—The *DuBarry* brings all of this to the bathroom. The deep lustre of Chromium combined with colored mirrors or regular silver mirrors provides opportunities to create truly striking effects or to harmonize this complete unit with the general color scheme of the bathroom.

The center unit—a large recessed mirror flanked with narrow full length mirror panels—is set in a brass, chromium plated frame. The concealed light fixtures are located behind ground glass panels at the top center and behind the narrow mirrors on each side of the large center mirror. Perfect illumination for the entire bathroom and for shaving and dressing the hair is provided.

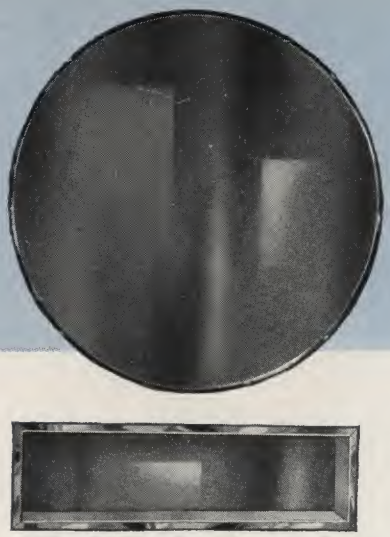
The color of the large center mirror is optional, either the new rose (flesh) or regular silver. The small narrow side mirrors may be had in blue, green, gun metal, rose (flesh) or regular silver.

There are no doors on the side cabinets. Cabinet frames are brass, chromium plated. These cabinets are lined on the inside with mirrors, either blue, green, gun metal, rose (flesh) or regular silver. Three glass shelves to match the mirrors are furnished with each cabinet.

The wall opening for the center unit is 28½"x30¾"x4⅜"; overall size, 29⅛"x 31⅜"; mirror 20"x26". For the side cabinets the wall opening is 25⅜"x9$\frac{3}{16}$"x 4⅜"; overall size, 9$\frac{13}{16}$"x26".



DUBARRY
MIRROR-CABINET
ENSEMBLE



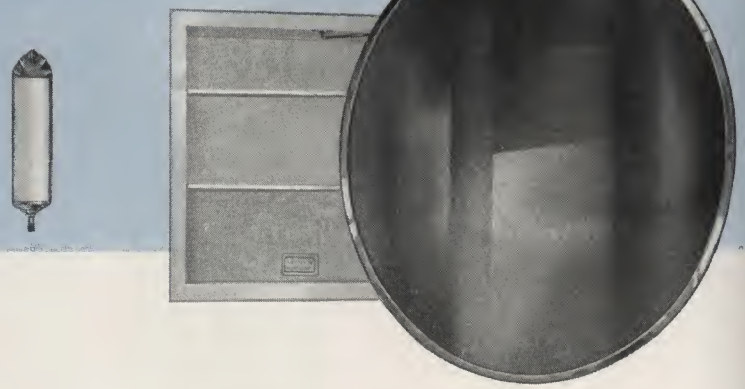
The POMPADOUR

The *Pompadour*, an ideal unit for guest bathroom, the downstairs lavatory or the dressing room, consists of a 26-inch circular mirror and glass-lined recessed shelf. There is no cabinet behind the circular mirror. The steel back on which the mirror is mounted is fitted for concealed hanging on the wall. The new rose (flesh) color mirror is available at slight additional cost.

The frame around the lower recessed shelf is brass, *chromium plated*. The shelf itself is lined with mirrors. Colors available are blue, green, gun metal, rose (flesh) or regular silver. The wall opening for the lower shelf is 23⅜"x7⅜"x4⅜".







The DUCHESS—The MODERNE

These two popular cabinets are identical, except that the *Duchess* has the mirror set in a beautiful circular frame of *brass, chromium* plated, styled to match today's modern chromium plated bathroom fixtures and accessories.

When installed in the wall, the *Moderne* and the *Duchess* look like beautiful circular mirrors hung on the wall. The illustration of the Pompadour at the left shows how both models appear when the door is closed. The ingenious hinge on which the door is swung permits it to be pulled outward over the lavatory so that when opened the mirror is only a few inches from the face—an ideal arrangement for shaving or dressing the hair.

The cabinet box of both the Duchess and Moderne is constructed of heavy-gauge ARMCO steel. The body and door backs are finished in *Miami Crystal Snow*, guaranteed not to retain a stain or to discolor with age. Equipped with two adjustable plate glass shelves, and Miami chromium plated razor blade drop. Mirror size is 26" circle; wall opening, 16½"x16½"x4¼".

The POWDER PUFF



The custom-built *Powder Puff* unit, illustrated on the left, adds the final touch to the modern powder or dressing room. The outside frame is *brass* finished in lustrous *chromium plate*. The large center mirror is genuine "A" quality plate glass in either the new rose (flesh) color or regular silver, as desired.

The small mirrors on either side of the large center mirror are optional as to color—either rose (flesh), gun metal, blue, green or regular silver. The recessed lower shelf may also be had in the same colors as the small side mirrors or in regular silver.

The light brackets are concealed behind the two small side mirrors and are so located that the light is reflected onto the large center mirror through ground glass panels. The overall size is 35"x41¼"; wall opening, 34⅜"x40⅝"x4⅜".

FOR the MODERN POWDER ROOM

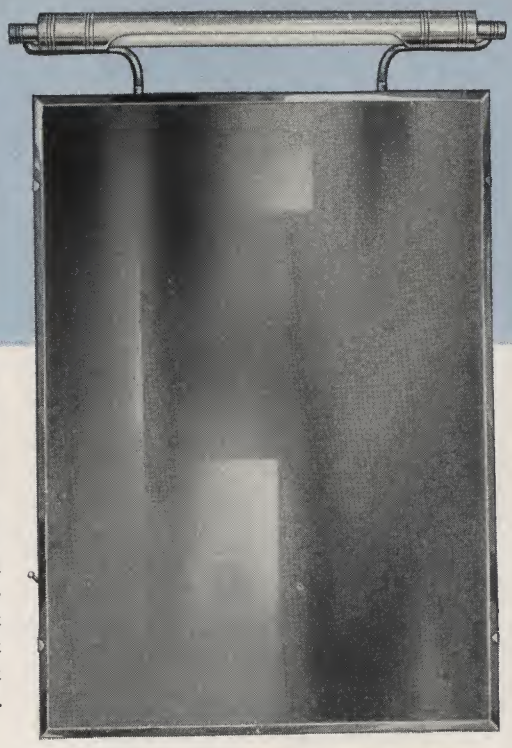
In the home of today, the Powder Room is almost as essential as was the bathroom in the house of the late nineties. Equipped with the beautiful Miami "Powder Puff," it attains the utmost in completeness and distinctiveness.

TUBULAR LIGHT BRACKETS for MIAMI CAREY CABINETS



MIAMI CABINET FITTED WITH LIGHT BRACKETS No. 3.

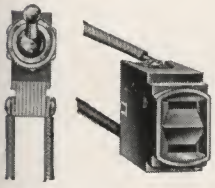
Miami-Carey Cabinets fitted with new and distinctive chromium plated, tubular light brackets bring new beauty to your bathroom lighting at an attractive saving in cost. Tubular Light Brackets No. 3 and 4 are exclusive with Miami. The brackets are correctly located to concentrate light at the point where it is most needed and yet provide sufficient illumination for entire bathroom.



MIAMI CABINET WITH OVERHEAD LIGHT BRACKET No. 4.

TUBULAR LIGHT BRACKETS No. 3

The No. 3 Tubular Light Brackets are designed to take a T-8 frosted bulb, either 40 or 60-watt. This bulb is available at all electric shops. There is no glass shield over the bulb. The frosted light bulb itself serves the purpose. Both No. 3 and No. 4 Tubular Light Brackets have chromium plated shields around the light bulbs, adjustable in all arcs of a 180° angle.



SWITCH AND OUTLET

All cabinets ordered with light brackets attached are fitted with switch and electric convenience outlet. They are fitted on the return flanges of the cabinet.

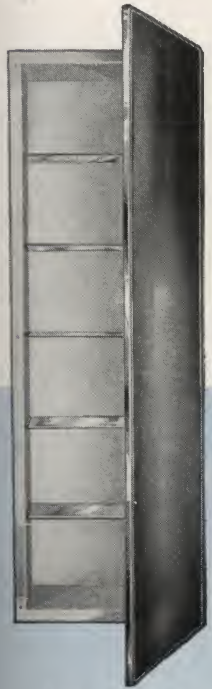
OVERHEAD TUBULAR LIGHT BRACKET No. 4



The above photograph illustrates a square top cabinet fitted with a single Tubular Light Bracket. This type of installation is recommended for the small bathroom, for the downstairs lavatory and for the low cost home where perfect illumination of the bathroom is as essential as in the more costly home.

TOWEL SUPPLY and UTILITY CABINETS

MODEL 510-A



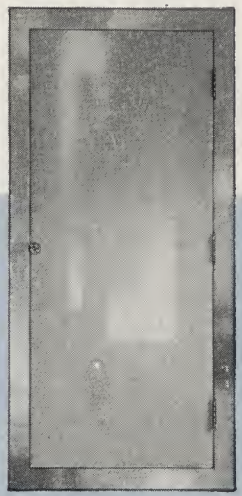
MODEL 510-A

Designed for the luxurious bathroom. The "A" quality mirror, set in a beautiful *chromium plated* frame, is *copper backed*, guaranteed for five years against silver spoilage. The heavy, air cushioned door is swung on a *brass, chromium plated* piano hinge. The cabinet and door back are finished in Miami *Crystal Snow*, guaranteed not to retain a stain nor to discolor with age. Five glass shelves are furnished. Mirrored door also serves as a full-length bathroom mirror. The wall opening is 17¾"x57¾"x8"; mirror, 20"x60"; overall, 20¼"x60¼"x8⅝".

★

MODEL 500

This cabinet, smaller than the No. 510-A, is designed and constructed for the less pretentious bathroom where extra storage space is also required. The entire cabinet, including the door, is constructed of ARMCO selected steel. Five glass shelves are furnished. The door is swung on three *brass, chromium plated* hinges. There is no mirror in the door. The cabinet is finished in Carey first quality baked enamel. White is the regular finish. At additional cost the unit may be had in any color desired. The wall opening required is 14¾"x34½"x6"; the overall size is 18"x37¾"x6¾".



MODEL 500

CABINETS
with
FULL-MIRROR DOOR



Nos. 610-G, 620-G

GOTHIC TOP MODELS

The classic beauty of these two Carey Cabinets with full mirror door is now available for the modest home and apartment at new all-time low prices. We are able to offer these two new and different Gothic models at such prices only because of improved manufacturing methods.



Nos. 2010-P, 2020-P

This model has no frame around the mirror. The mirror is hung on a steel door of the hollow metal type and covers the entire cabinet so that when the cabinet is set in place, the appearance is that of a mirror hung on the face of the wall. The arched top suggests this cabinet for the bathroom where the design is arched or curved.

To those who prefer the all-glass front cabinet with no knob, hinges or ugly screw heads to mar the face of the mirror, we recommend this Gothic model.

SPECIFICATIONS

	No. 610-G	No. 620-G
Overall	16″x26″	18″x28″
Mirror	16″x26″	18″x28″
Wall Opening	13¾″x19¾″x3½″	15¾″x21¾″x3½″

The Gothic Top Model shown above has a *stainless steel* frame around the mirror, absolutely non-rusting and may be kept clean and highly polished just by rubbing with a clean, dry cloth. *Stainless steel* is the perfect match for chromium plated bathroom fixtures; hence, this Gothic model is particularly recommended for bathrooms fitted with chromium plated fixtures where the budget does not permit the purchase of higher priced chromium plated models.

SPECIFICATIONS

	No. 2010-P	No. 2020-P
Overall	16⅝″x26⅝″	18⅝″x28⅝″
Mirror	16″x26″	18″x28″
Wall Opening	13¾″x19¾″x3½″	15¾″x21¾″x3½″

THE ARISTOCRATS

The Aristocrat model illustrated below is designed for the home where price must be considered, but where quality is also taken into consideration. It was created by Carey engineers to embody both beauty of design and sturdiness of construction—at a moderate price. When the Aristocrat is set on the wall, it resembles an unusually handsome mirror. There is no knob, hardware or portion of the body visible.



No. 660-F, 670-F

SPECIFICATIONS

No. 660-F

Mirror	16″x24″
Wall Opening	13¾″x19¾″x3½″

No. 670-F

Mirror	18″x30″
Wall Opening	15¾″x21¾″x3½″

MASTER MODELS

The Master models are suggested for the bathroom where straight lines are required. The one-piece *brass, chromium plated* frame eliminates the necessity of ugly corner clips commonly used to cover up open joints. The cabinet body and door back are finished in the famous Miami *Crystal Snow*, noted for durability.

SPECIFICATIONS

No. 1100

Overall	16¼″x22¼″
Mirror	16″x22″
Wall Opening	13¾″x19¾″x4¼″

No. 1150

Overall	18¼″x24¼″
Mirror	18″x24″
Wall Opening	15¾″x21¾″x4¼″

No. 1175

Overall	20¼″x28¼″
Mirror	20″x28″
Wall Opening	17¾″x25¾″x4¼″

Return Flange, ¼″

EQUIPMENT

Regular equipment includes three adjustable glass shelves, razor blade drop, piano hinge, tooth brush racks.



Nos. 1100, 1150, 1175

CHROMIUM BATHROOM ACCESSORIES

by MIAMI

BRILLIANTLY BEAUTIFUL

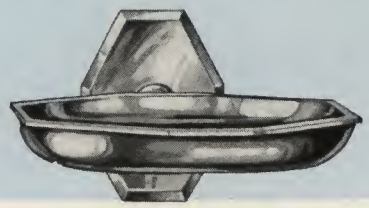
The line of MIAMI Chromium Lifetime Bathroom Accessories was developed to meet the need of those who wanted a product that was thoroughly modern . . . that could be bought at popular prices . . . that could be inexpensively installed in practically any bathroom.

MIAMI Chromium Bathroom Accessories are built to resist long wear and hard use. Over a forged, brass base, a thick coating of nickel is applied and then a covering of hard chromium. This method of manufacture assures a product that will give utmost satisfaction and retain its original brilliance.

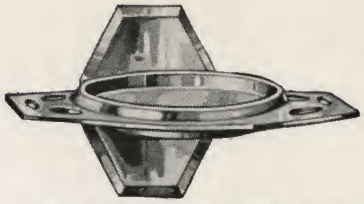
Projection type accessories, a few of which are illustrated on the right, are tightly secured with a new type of key plug. They are furnished with either "L" lug type brackets for installing the fixture permanently into the wall; or with "S" screw-on type brackets that fasten to practically any surface. The screws are concealed by the front plate of the bracket.

The recessed accessories shown at the bottom of this page are provided with larger and wider flanges which eliminate open joints, fit perfectly and give a more finished appearance. When installed, they become a part of the wall itself.

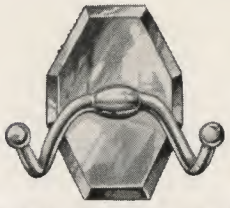
MIAMI "Time Saver" Recessed Accessories are the same in appearance as the Miami Recessed Accessories. Although they are smaller, they are equal in inside area to the average 6″ x 6″ china accessory.



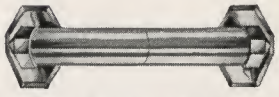
No. 5005—Soap Dish



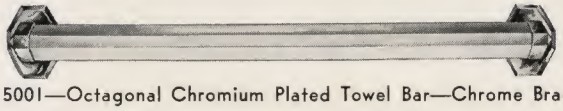
No. 5008—Tumbler and Tooth-Brush Holder



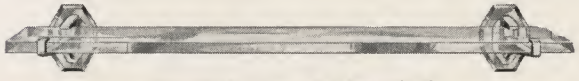
No. 5011—Double Robe Hook



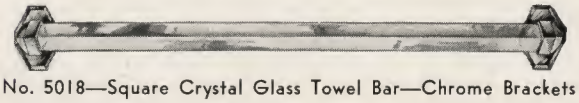
No. 5012—Paper Holder with Chromium Roller



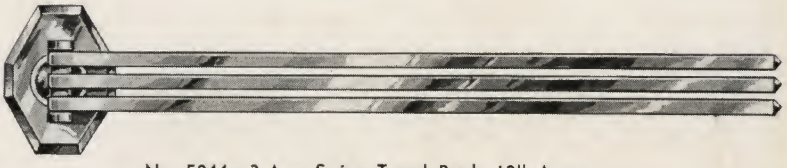
No. 5001—Octagonal Chromium Plated Towel Bar—Chrome Brackets



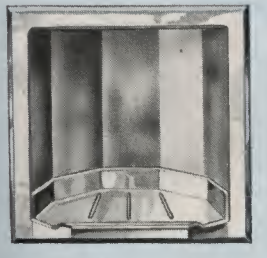
No. 5014—Crystal Glass Shelf



No. 5018—Square Crystal Glass Towel Bar—Chrome Brackets



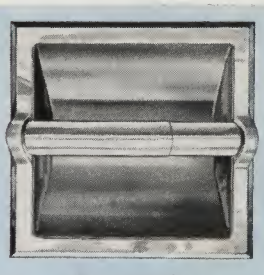
No. 5044—3-Arm Swing Towel Rack, 12" Arms



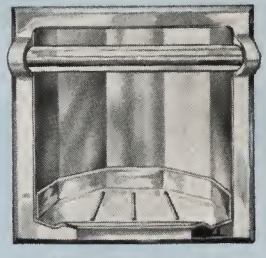
No. 6000—Soap Holder with Glass Tray



No. 6001—Tumbler Holder



Paper Holder
No. 6002—Chrome Roller
No. 6003—Wood Roller



No. 6004—Soap and Grab Bar with Glass Tray



★

If you are not acquainted with a Carey dealer in your community write to the Carey branch nearest to you. You will immediately be advised of your most convenient source of supply for Carey products and service.

★

THE PHILIP CAREY COMPANY

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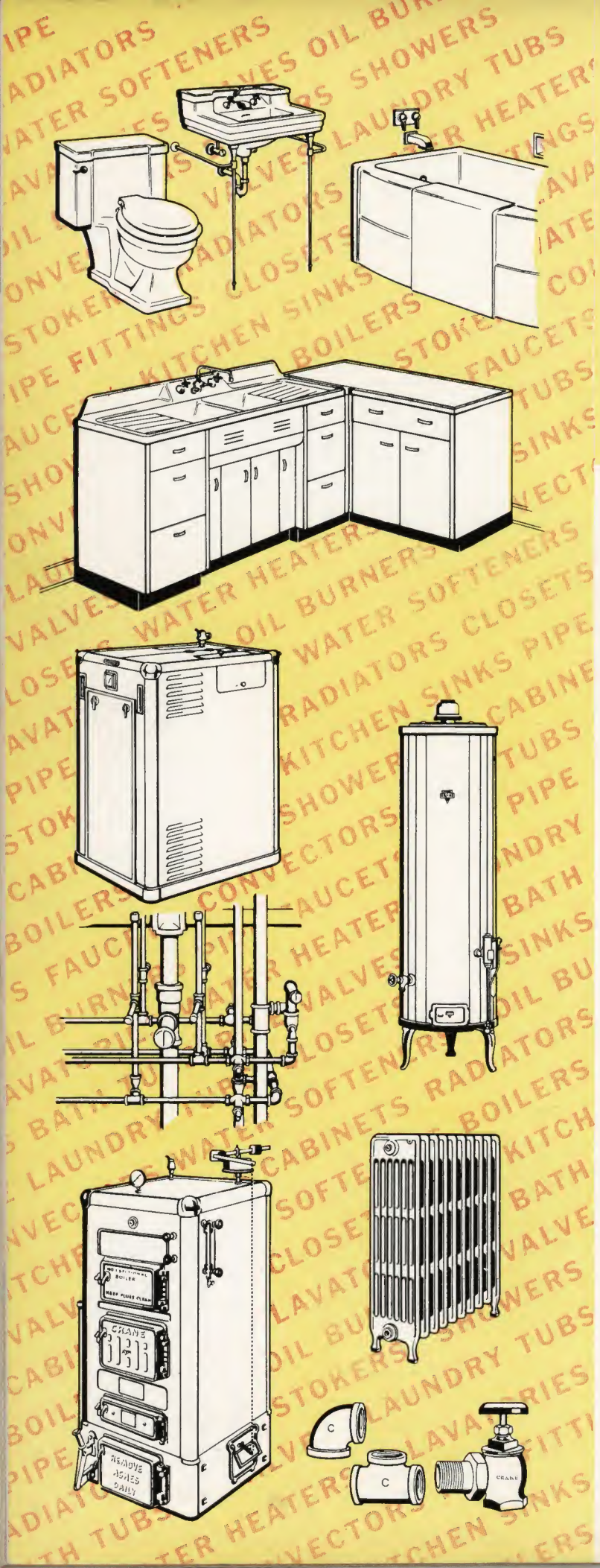
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FOR THE HOME OF TODAY

CRANE PLUMBING AND HEATING EQUIPMENT



Your Entire Home SHOULD BE CRANE-EQUIPPED



Whether the home be a simple cottage or an elaborate mansion, it is deserving of the best in equipment. Tastes vary — budgets vary—a bath suitable for one home is totally out of keeping in another, but regardless of the amount to be spent, it should be spent wisely with a full regard for the long life and service which every home owner has a right to expect from his equipment.

The name "Crane" has stood for quality in materials and workmanship since the founding of the company 83 years ago. So synonymous have been the two, Crane and Quality, that many people have jumped to the erroneous conclusion that Crane fixtures must be high priced. As a matter of fact, you pay no more for Crane Quality than for much plumbing and heating equipment similar in general appearance but of greatly inferior value. Often Crane fixtures cost less to install.

Exact manufacture and precise engineering actually facilitate installation. Crane fittings and fixtures wear longer, hence, are most economical in service.

Crane bathroom fixtures either of vitreous china or porcelain enamel may be had in eight beautiful colors and White—Orchid Pink, India Ivory, Citrus Yellow, Sun Tan, Pale Jade, Lucerne Blue, Persian Red and Black.

For the satisfaction of having the best, the most complete, convenient and modern home one could desire, Crane-Equip throughout with Crane Baths, Lavatories, Showers, Kitchen Sinks, Laundry Tubs, a Crane Boiler, Valves, Radiators, Convectors, even Crane pipe fittings. Specify Crane and be sure of *enduring quality* and an investment in long, satisfactory service.



HOWER *NEUVOGUE* CLOSET *C 10384 SIWELCLO* BATHTUB *C 3240-LV33 NEUVOGUE* LAVATORY *C 128 NEUVOGUE*

Planning YOUR NEW BATHROOM



How many bathrooms should there be in a house? Naturally the answer to this question depends, to a large extent, upon the size of the house and the number of persons. For maximum convenience and comfort, the ideal home calls for a bathroom for each bedroom; and in practice it is much more satisfactory to have several compact inexpensive baths rather than a single large one. In designing a new home, provision should most certainly be made for adequate bathroom facilities for nothing will prove a more worth-while investment in home satisfaction through the years to come.

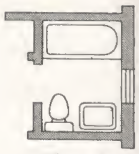
When a house has more than one floor the convenience of a downstairs lavatory makes this addition almost a necessity. It may be a simple, small room tucked away at the end of a hall or below a stairway or it may take the form of a delightful little powder room, if fancy dictates.

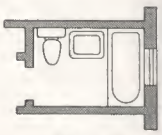
In planning a bathroom, the most convenient arrangement of fixtures in the available space must be taken into consideration. But the location of these fixtures in relation to the piping and necessary vents is also an important part of the plan. The type of fixtures best suited to each room must be considered—the materials to be used in the rooms themselves and the most desirable color schemes are points which must be considered in any bathroom plan. Suggestions on these points will be found in the following pages and to assist the home owner further, Crane Co. has provided a new Bathroom Planning Service available for consultation at every Crane Branch. Here are shown all the basic types of bathrooms, together with variations—actual bathrooms have been built and photographed in color; and these are illustrated together with complete data on materials, architectural effects, furnishings and suggested piping arrangements.

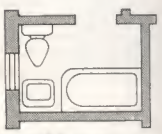
This material is intended for your use as well as for the use of your architect. Consult the nearest Crane Branch for full bathroom planning information—this entails no obligation on your part.

DENTAL LAVATORY *C 1213 CORWITH* CLOSET *C 10482 MONADA* LAVATORY *C 172 CORWITH-COMPEER* BATHTUB *C 3225-LB91*

THE first step in planning a bathroom is the location of the fixtures for the most practical and convenient use. Research has shown that there are six basic bathroom plans and any properly planned bathroom will follow one of these layouts. Illustrated here are the six basic types. The size of the space available naturally governs, to some extent, the arrangement and the architecture of the house is also a controlling factor. The most inexpensive arrangement from the standpoint of piping is illustrated in plan B. Here all the fixtures are placed so that supply and waste lines are in one wall. However, this frequently does not permit a satisfactory room layout; and a few dollars additional in piping expense will be more than compensated for if a more convenient arrangement is achieved.


Plan A


Plan B


Plan C

BEAUTIFUL LAVATORIES FOR EVERY HOME



Cromwell Lavatory
C 174 An ideal lavatory for the downstairs toilet or powder room. A real space saver. Smartly designed of vitreous china, its gleaming surfaces are easy to clean—easy to keep clean. Rectangular basin, valves on individual angle panels and waste operated by a lever through the back. Size 26 x 14″.

Sterling Lavatory
C 180 E12 A vitreous china lavatory with raised shelf on 2 metal legs. Mixing faucet for tempered water, with lever action waste. Chromium - plated fittings. Sizes 20 x 18″ and 24 x 21″.



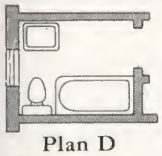
Hermitage Lavatory
C 654 A beautifully designed lavatory at a very modest cost. Made of gleaming, easily-cleaned vitreous china with a wall-protecting back. Chromium-plated metal spout supply fixture, chain and rubber stopper. Size 20 x 13½″ as illustrated, or 26 x 13½″ with "wave" front.



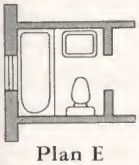
Ipswich Corner Lavatory
C 684 A compact, vitreous china corner lavatory, ideal for small space such as the downstairs lavatory. Chromium plated *Rainier* mixing faucet gives tempered water. Size 17 x 17″.



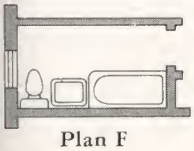
BATHTUB *C 3284-LC99 CORWITH* LAVATORY *C 221-L 11T CORWITH* CLOSET *C 10541 SANTONIA*



Plan D



Plan E

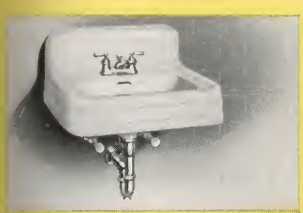


Plan F

IMPORTANT as the fixtures in a bathroom are, their proper operation depends upon the hidden piping and fittings that carry water to the bathroom and drain the wastes away. Three elements affect the functioning of this system: 1st, the pipe, fittings and valves must be of the highest quality to assure years of satisfactory service; 2nd, the layout for the piping must be carefully planned by an experienced plumbing contractor to assure efficient service; and 3rd, the installation must be made by a dependable plumbing contractor whose years of experience are your guarantee of a reliable installation.

Good contractors recognize the important part that valves, fittings and piping play in every installation—they assure a trouble-free, efficient installation by the use of Crane material.

CABINET AND WALL LAVATORIES FROM THE CRANE LINE



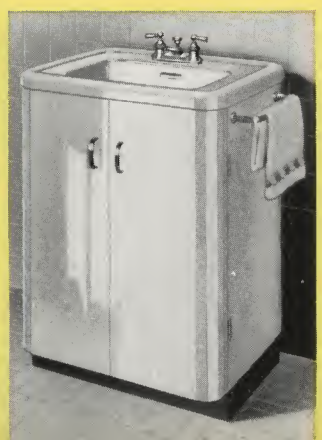
Rhodile Lavatory

C 2151 A porcelain enameled on cast iron lavatory with 6-inch back and rectangular basin. Compact *Rainier* single spout supply and pop-up waste fixture allows ample free slab surface. Size 20 x 18″. Specify C 2158 for *Rhodile* with all steel baked enamel cabinet.



Closin Lavatory

C 2372 Exceedingly compact and economical of space is this *Closin* porcelain enameled cast iron lavatory. Fitted with *Rival* compression faucets, chain-stay, chain and rubber stopper. Metal trimmings are chromium-plated. Size 26 x 14″.



Coronet Lavatory

C 281 Vitreous china lavatory with low shelf back. Comfort angle control panel. A roomy cabinet with ample shelf space both inside and on the door. Size 24 x 20″.

Coronada-Lavinet Lavatory

C 1991 The *Coronada-Lavinet* makes use of every square inch of space; all-steel baked enamel cabinet provides ample storage space with shelf in the cabinet and "shelf-in-door" feature. Porcelain enameled cast iron lavatory with rectangular basin. *Rainier* supply and pop-up waste. Towel bars can be furnished if desired. Size 24 x 20″.





LAVATORY *C 138-L12 CORWITH* BATHTUB *C 3220-LH51 MARSHALL* DENTAL LAVATORY *C 1213 CORWITH* CLOSET *C 10384 SIWELCLO*

THE swing today in bathroom design is toward color. Particularly is this true in fixtures; and undoubtedly one of the contributing factors is the beautiful color selection offered by Crane fixtures. Warm Sun Tans and Citrus Yellows add a cheery note to the room with a northern exposure while cool Jade Greens and Lucerne Blues make a refreshing contrast in the sunny southern room. For those who prefer more pastel shades, there are Ivory or Orchid Pink; while any bathroom or powder room can be highly dramatized with fixtures in Persian Red or Black.

Walls and floors, too, permit many color treatments and with the new and interesting materials that are now on the market it is a simple matter to plan a beautiful bathroom to suit every purse. Many of these materials are permanent or semi-permanent in nature, such as glass brick and tile, while others including linoleum and composition boards, may be changed to suit changing taste.

The Crane Bathroom Planner contains a wealth of information. Be sure to consult it at the nearest Crane Branch.

THE NEUDAY LAVATORY IN CABINET, LEG AND WALL STYLES



Neuday Cabinet Lavatory
C 2504 This *Neuday* Cabinet Lavatory combines all the requisites of the up-to-date lavatory with the storage convenience of a roomy, all-steel cabinet, finished in baked enamel with chromium plated hardware. Lavatory is porcelain enamel on cast iron. Size 19 x 17".

Neuday Lavatory on Two Legs
C 2502 This *Neuday* Lavatory with its slender chromium legs is strikingly handsome. Porcelain enamel on cast iron, it is easy to clean. Chromium plated towel bars, shown, can also be furnished. A beautiful lavatory for the modern bathroom. Size 19 x 17".



THE Neuday family of lavatories combines simplicity with convenience—beauty with economy. Made of porcelain enamel on cast iron, the basin is of ample size yet the lavatory is compact for the small bathroom. A handy shelf is provided and the controls, including a mixing faucet to give tempered water are on an angle panel—out of the way yet readily convenient.

Neuday Lavatory
C 2500 A beautiful lavatory of porcelain enamel on cast iron. Has a 15½ x 10½" basin. Water supply and lift-waste knob are on an inclined panel for easy operation. Exposed metal parts chromium plated. Size 19 x 17".



DENTAL LAVATORY *C 1213 CORWITH* BATHTUB *C 3240-LC 99 NEUVOGUE* LAVATORY *C 1311-L11 CORWITH* CLOSET *C 10490 MANOR*

INCLUDED in the Crane Bathroom Planner service are interesting little architectural effects that may be applied to any bathroom and which offer a different approach to bathroom planning.

New materials have made possible new ideas for instance in the room shown on page 8, glass brick has been used in place of windows, and light from this source is ideal whether the master of the house is shaving or milady is powdering her nose.

There are many chances to add novelty, interest and practical utility also to the modern bathroom by a little study—the mirror placed over the window or an indirect lighting arrangement (see above) are in tune with this modern idea. The book shelf in the wall shown on page 6, the large mirror behind the lavatory on page 4, and the recessed shelves against the curved background shown on page 5 may offer practical suggestions.

The Crane Bathroom Planner is replete with practical, usable ideas which may offer suggestions to you—consult it before you make your plans.

REPRESENTATIVE CRANE LAVATORIES IN TODAY'S TASTE



Norwich Lavatory

C 259 Full pedestal type. Vitreous china with chromium-plated fixture. Sizes 27 x 22″ and 24 x 21″.

Corwith Pedestal Lavatory

C 2005 Economically priced for those desiring beauty and features of the pedestal type lavatory. Rectangular basin and large slab space with chromium-plated *Rainier* supply and pop-up waste fixture. Sizes 24 x 20″ or 27 x 22″.



Corwith Lavatory

C 1995 Porcelain enamel on cast iron lavatory on metal legs. *Rainier* mixing faucet for tempered water, with pop-up waste. Chromium-plated fittings. Sizes 27 x 22″ and 24 x 20″. Towel bars included if so ordered.





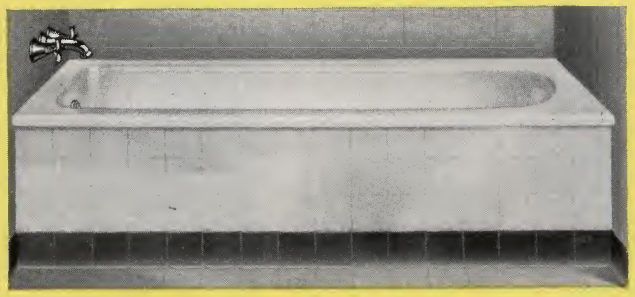


CLOSET *C 11000 MERIT* LAVATORY *C 172 CORWITH-COMPEER* BATHTUB *C3308-LB93 CORWITH*

A BASIC part in the planning of any bathroom is the number and size of the fixtures to be included. The Crane line is so extensive that it contains fixtures to suit every taste as well as every purse. Bathtubs may be had in a variety of sizes and styles from the simple, sturdy *Doris* shown on page 9 to the stately *Marshall* illustrated on page 6. For the better bathroom in the moderately priced home, the *Neuvogue* bathtub shown on pages 3, 4 and 7 or the *Corwith* illustrated on pages 5 and 8 are to be recommended.

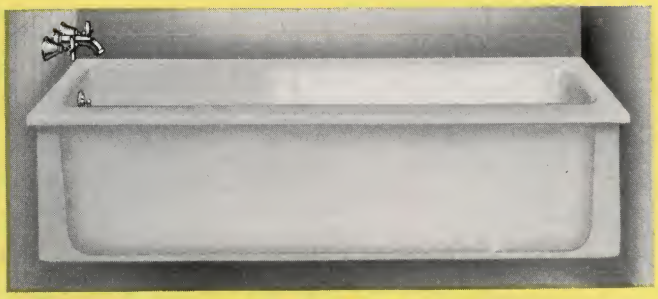
In choosing a lavatory there is ample room for individual preference. A choice might lie between a lavatory of vitreous china or porcelain enamel on cast iron, supported on gleaming chromium legs, or a pedestal lavatory with its easily cleaned porcelain enamel base. In the downstairs powder room, where space is limited, a wall lavatory may be preferred, and in the Crane line are lavatories specially designed for use in confined space. Crane closets, too, are made in a style to suit every purse —all are designed to give the maximum in satisfactory service. In planning your bathroom, it is advisable for you to consult your Plumbing Contractor or the nearest Crane Branch to secure the latest suggestions in Crane fixtures.

RECESSED AND CORNER TUBS IN EVERY PRICE RANGE



Crane *Tarnia*

C 3336-C27 For the finer bathroom this tiled-in tub is both distinctive and beautiful. Lends itself to many tiled settings. Fitted with *Rival* overrim fixture and *Accesso* pop-up waste and overflow. Furnished in 5, 5 ½ and 6-foot lengths, 32″ wide or 5½′ long and 36″ wide.



Crane *Verna*

C 3370-LC27 A moderately priced recessed tub of cast iron with porcelain enamel interior. Outside may be painted to match any color scheme. *Rival* overrim fixture and *Accesso* pop-up waste and overflow, 4½, 5 and 5½′ long.



THE CHARM OF A *Powder Room* CAN BE YOURS



WHETHER you wish an inviting feminine little room like this for the use of your guests or a more sturdy, practical downstairs lavatory, you will find in the Crane line of plumbing equipment just the lavatory—just the closet best suited to your needs in a wide range of prices.

Convenient as powder rooms are, they almost invariably make use of some unused corner, a few square feet under the stairs—the otherwise wasted end of a hall. And the use of so small a space often results in cozy charm that is one of the principal assets of a powder room.

Like the bathroom, the decorative treatment of the powder room is infinite in its possibilities. With the introduction of many new materials, almost any effect may be obtained. Inlaid linoleum or washable wallpaper makes possible an inexpensive room. In the Crane line there are fixtures just suited to the powder room.

CRANE QUALITY IN MODERATELY PRICED FIXTURES



Crane *Doris*
C 3442-N60 A simple, economical tub but still of Crane quality porcelain enamel on cast iron; painted exterior. *Telsa* double faucet, exposed waste with chain and stopper. Available in 4, 4½, 5, 5½, and 6-foot lengths.



Hanover C11004—A close-coupled closet of modern design, beautiful in appearance, yet low in cost. Self-draining jet — whirlpool action and low height seat.

Neuton C 11145—An inexpensive closet, yet designed with the same care to detail as the finest in the Crane line. The familiar hump on the front of the washdown closet has been eliminated, giving a more modern appearance. Comfortable, low-height bowl recommended by doctors.



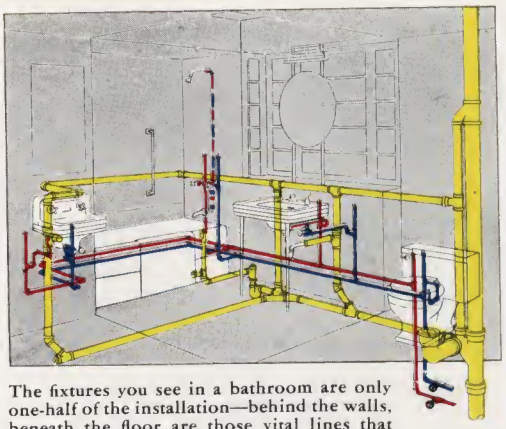
Superiority OF CRANE-EQUIPMENT



In choosing plumbing and heating equipment for the home, quality is of paramount importance—replacements are difficult and costly and a single bill for repairs may easily be greater than the slight difference between high quality and equipment of inferior construction.

No home owner can be expected to possess the necessary knowledge for checking accurately the value of plumbing and heating equipment—surface appearance alone is not conclusive—it's the quality inside—the matter of design—the use of the finest materials, even where they will not show, that make the difference between long satisfactory service and early repairs. This is why it becomes doubly important in installing such permanent equipment as plumbing and heating to see to it that the equipment is made by a manufacturer having a consistent reputation for quality.

For over three quarters of a century the name Crane has always been associated with the finest in both design and manufacture. In fact, so true is this that many feel, of necessity, Crane plumbing and Crane heating must be expensive. Great as this tribute is to Crane quality it is, as a matter of fact, false. The huge Crane plants, producing porcelain enamel and vitreous china plumbing equipment—radiation and boilers—valves and fittings—and the Crane distributing organization, world wide in scope—mean mass operation and therefore the lowest possible price consistent with high quality.



The fixtures you see in a bathroom are only one-half of the installation—behind the walls, beneath the floor are those vital lines that bring pure, fresh water to your faucets and remove disease-breeding wastes.

The proper functioning of your bathroom depends, to a large extent, on this important—unseen half.

In planning your bathroom be sure to consult with a Plumbing Contractor early in the planning stage and secure his suggestions as to the layout best suited to your room.

It may be definitely stated that style for style, material for material, grade for grade, products carrying the name Crane cost no more than others.

Crane Vitreous China

Crane vitreous china is produced in our own potteries—at Trenton—one of the oldest in the country; the tradition of the ancient art of pottery-making lives on in the product of this modern plant of today. Made of the finest clays, receiving the most minute inspection at every step in production—Crane vitreous china retains its gloss and its original beauty. A piece of vitreous china is the same material throughout, fired to a hard, wear-resisting surface as easily cleaned as a china plate and unaffected by household acids.

Crane Acid-Resisting Porcelain Enamel

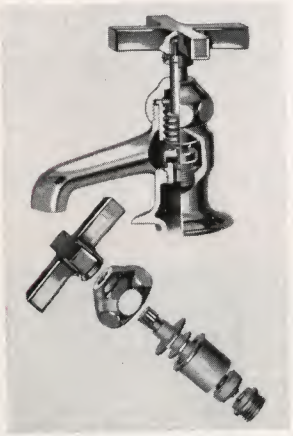
From the smooth close-grained gray iron castings to the evenly applied porcelain enamel, every step in the production of Crane enamelware is under the most careful inspection. The result is a product that readily shows its quality by comparison.

Crane porcelain enamel is smooth and easily cleaned with a damp cloth. The acid-resisting finish makes it impervious to fruit juices or household acids—it is durable and will retain its beauty for years.

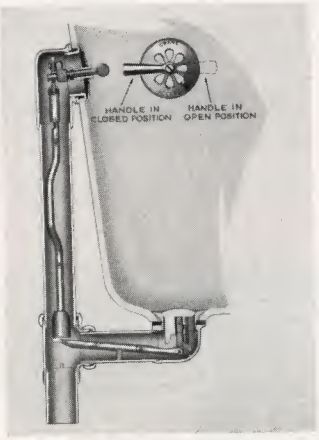
In the purchase of ordinary porcelain enamel there are pitfalls for the unwary. It is not unusual where proper supervision and inspection have not been used for flaws to develop even after installation.

The name Crane on every porcelain enamel sink, lavatory or bathtub is your assurance of maximum quality and maximum service.

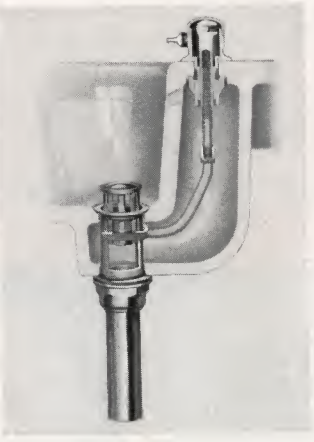
CRANE QUALITY BRASS HAS FEATURES YOUR HOME DESERVES



Newsleeve Unit—Longer life for faucets is found in the *Newsleeve* unit. Entire operating unit may be replaced without removing faucet from fixture, slips in like a cartridge.



Accesso Waste—An exclusive Crane design, that seals the tub at outlet; water used by previous bather cannot contaminate fresh supply. Positive lever action—tight and trouble-free.



Lever Action Securo—Quick draining lavatory waste. Designed to produce rush of water which leaves the bowl clean. Positive action operates with a touch of the finger. Strainer removable for cleaning.



Crane Deviator Spout for Showers—Turn on the water. It runs from the spout. Raise the knob, it gushes from the shower. When the water is shut off knob drops back. No chance of an inadvertent dousing.



Mixing Valve Shower

C 4364-B In this shower the Crane Mixing Valve is used, assuring convenient control of the water temperature. All necessary water connections are concealed in the wall. An added feature of this shower is the screw-driver controlled stops. These permit adjusting of the water pressure.



Twin Valve Shower

C 4403-B A beautiful, well-made shower, with concealed valves having renewable seats. Shower head is 4″ in diameter with an adjustable ball joint and removable face. Chromium plated. Large easily grasped handles make control easy even for wet, slippery hands.



A Crane Shower FOR YOUR HOME

Nothing is so invigorating or healthful as a clean, sparkling shower. This modern sanitary method of bathing is a necessity in every home—in every bath. Cooling, refreshing in summer—warm and pleasant in winter.

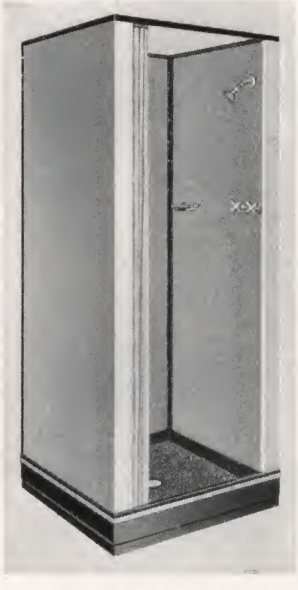
Crane showers are designed for every home—for every purse. Mixing valve showers—separate valve showers—even complete shower compartments for the extra shower in the basement.

All Crane showers are of the familiar Crane quality—built to give you lifelong satisfaction.



Thermostatic Shower

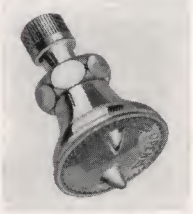
C 4420-BA A shower of the highest grade for those who appreciate the best. Has a thermostatic mixing valve which prevents sudden changes in water temperature. Screw-driver operated stops permit adjusting water pressure or shutting off the water if desired.



Shower Compartments

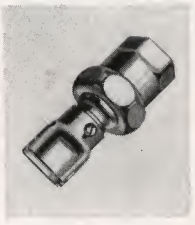
C 4712 Particularly suitable for an extra shower in the basement. Baked enamel finish in a handsome pastel green. Base is black porcelain enameled outside, mottled green and black inside, with chromium-plated waste strainer. Head is of the *Refreshor* type easily cleaned.

Refreshor Shower Head

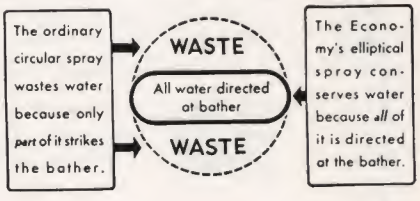


C 4875-B The *Refreshor* Shower Head assures you a snappy, needle spray—a bath pleasant and invigorating at an actual saving of one-half the water used in the conventional head. Easily cleaned by simply turning the head.

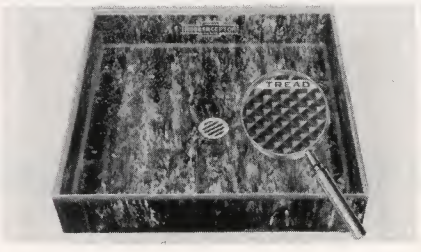
Economy Shower Head



The Crane *Economy* Shower Head, using less water than the conventional head, directs all of the shower on the bather. The water is aerated, assuring a soothing, invigorating spray.



RUBBERCEPTOR SHOWER STALL



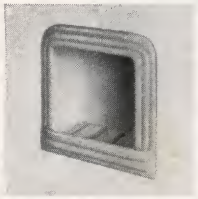
C 5090 *Rubberceptor* Shower Stall receptor. One-piece construction. Slip-proof diamond tread, soft and comfortable to the feet. Chemically treated, it will not crack, craze or chip. Inert to water, soaps and household acids. Economical to install. Variety of colors available. 37½ inches overall to fit stall to finish 36 x 36 inches.

Charming BATH ACCESSORIES

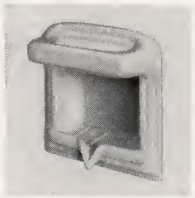
Attractive accessories that add to the convenience of the bathroom have been created to match or harmonize with Crane bathroom fixtures. Towel bars, tumbler holders, soap dishes and robe hooks of fine vitreous china, and recess medicine cabinets concealed behind mirrors are neat, necessary additions to any modern bathroom.

Vitreous China Accessories

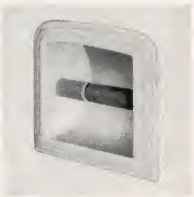
These charming little accessories add to the utility and attractiveness of every bathroom. The complete Crane line includes a wide variety of accessories to suit every need. May be had in any standard Crane color.



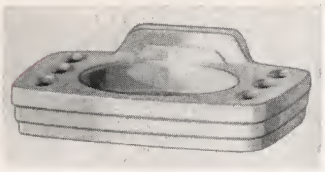
C 24970 China built-in Soap holder 6 x 6″ in 3⅝″ recess.



C 24975 Built-in recess grab bar and soap holder 6 x 6″ in 3⅝″ recess.



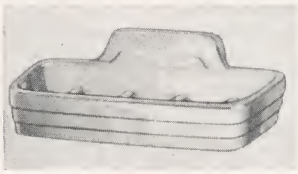
C 24984 Vitreous china built-in recess paper holder 6 x 6″ in 3⅝″ recess.



C 24935 China combination tumbler and toothbrush holder—3½ x 4⅞″.



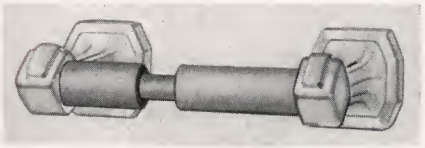
C 24932 China tumbler holder 3½ x 3⅜″.



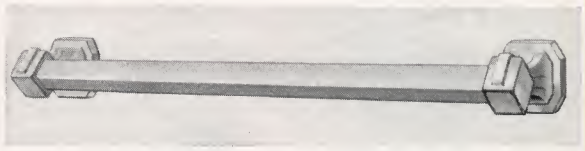
C 24940 China soap dish—3⅜ x 4⅞″.



C 24960 China robe hook.



C 24956 Toilet paper holder with china brackets.



C 24925 Crane square towel bar with china brackets—18, 24, 30 and 36-inch lengths.

"Simplicity" Accessories

Crane "SIMPLICITY" Accessories are ultra modern in design—chromium plated. They were created especially for use with such advanced fixture designs as NEUVOGUE. SIMPLICITY designs are available in towel bars, soap, tumbler, toothbrush and paper holders, combination soap holders and grab bar and crystal glass shelves and other accessories.



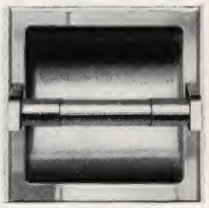
C 25117 Vertical grab bar. 18, 24 and 36-in.



C 25125 Toothbrush holder.



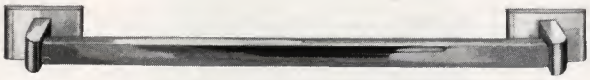
C 25122 Paper holder with metal roller.



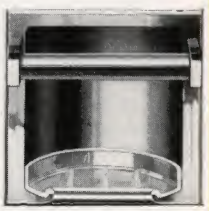
C 25142 Recess paper holder —wood or metal roller.



C 25112 Crystal glass shelf—5 inches wide. 18, 24 or 30-inch lengths. Also furnished in black glass.



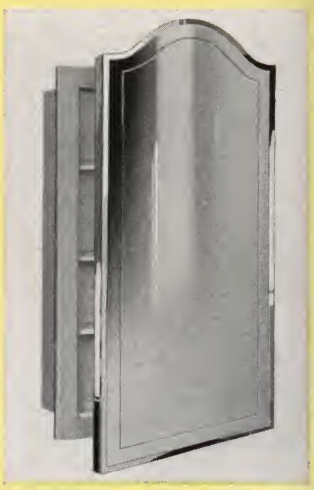
C 25113 Square metal towel bar 18, 24 or 30-inch lengths, also furnished in crystal or black glass.



C 25140 Recess soap holder and grab bar.



C 26888 Crane *Copley*. Door entirely conceals the cabinet. Equipped with tubular side lights. Has electric outlet. Mirror mounted in chromium-plated frame. Removable glass shelves, size of mirror 20 x 26″.



C 26894 Crane *Framed Venetian* chromium plated brass frame around door. Equipped with chain spring door stop. Mirror sizes 16 x 24″, 18 x 26″, 18 x 30″ and 20 x 32″.



C 26903 *Framed Simplicity* chromium plated brass door frame, adjustable glass shelves. 16 x 22″, 18 x 24″, 18 x 27½″ or 20 x 30″ mirror.

Family Planned Kitchens



What do you expect of your kitchen? First, of course, you want a comfortable place to work—a room designed to help you perform your tasks with a minimum of steps and a minimum of effort. Then you want a cheery, happy room, pleasant and homelike. But Crane home economics experts have found that a kitchen in most homes is more than just a room where meals are prepared—for instance most families eat one or more meals per day in the kitchen—many housewives prefer to do their ironing in the kitchen; and it is not uncommon for the kitchen to become a sewing room in off hours.

Growing children, sometimes, like a place to study near where mother is working. Nothing appeals more surely to the guests who come in for an evening than refreshments served with studied informality in a kitchen designed for that purpose.

For years Crane Co. has led in the scientifically planned Kitchen; and these years of experience are your guarantee that your Crane planned kitchen will, indeed, save you steps and make your housework easier. But the Crane Family Planned Kitchen is a new conception in kitchen planning, designed to suit you, your needs, your household and your tastes. Here are some suggestions:

Eating—Most American Families like to eat at least one meal a day in the kitchen. This being the case, many kitchens should certainly be planned with this function in mind. A breakfast nook or dinette may be provided in a plan that takes efficient kitchen layout into consideration as well.

Ironing—With an ironing board that swings down from the wall when the cabinet is opened and an electrical outlet right there for the iron—there is no better place to do this task than in the kitchen. And when the ironing is over, the board is raised out of the way—and the kitchen spick and span in an instant.

Sewing—What to do with the sewing machine is a problem in most every home. Here is a happy solution. With an electric outlet available, with a table on which to spread patterns, cloth, pins, thread—the kitchen seems to be quite a popular place for sewing. A special cabinet can be provided to conceal the sewing machine.

Playing—The dining space with its table and chairs provides an excellent spot for the smaller members of the family while mother is at work. Here in a handy cabinet they can have their toys and dolls—their paints and papers. Easily cleaned floors that defy rough usage are another added advantage.

Entertainment—With the kitchen the "showroom" of the house, it is amazing how guests will gravitate to it. Many of today's most successful parties have been held in the kitchen—not because they were planned that way, but because of its attractiveness and intimacy. And what more ideal spot in the house is there for the children to entertain than in the kitchen. Here they can pop corn—and here is plenty of working area on which they can make candy.

Resting—Many are the five- and ten-minute periods when you want to sit down and rest—time too short to go to the living room, yet too long to leave something you are cooking. Most women tell us that they like a comfortable place to sit down—so they see to it that there is a place that can be used for this purpose.

But these are only a few ways in which a Family Planned Kitchen can serve you. In the new Crane book "Family Planned Kitchens" you will find many suggestions—valuable little ideas—interesting ways in which you can make your kitchen more useful and more pleasant. A copy of this book will be sent to you on request. In it you will also find a work sheet which, if you fill it out, will bring you a plan made up specially for you from the information which you furnish. This plan will contain just the things you want to find in your kitchen.

This valuable service is designed to promote the planning of better and more useful kitchens and is furnished without charge and without obligation on your part.



A strikingly novel idea, but one which has been found so extremely practical in cutting down work and speeding up the usually hurried morning meal, is the breakfast bar illustrated here—A Crane *Sunnyday* Sink is placed against the wall, below a window. The stove is back against the counter facing the sink, with ample room between for food preparation.



What a satisfactory place the kitchen provides for sewing. Here is a table to work on, a floor that defies litter and above all a convenient place for the sewing machine—tucked away in a specially built cabinet, yet easy to slide out in a jiffy when needed. The floor is easily cleaned and threads or lint cannot cling to it.

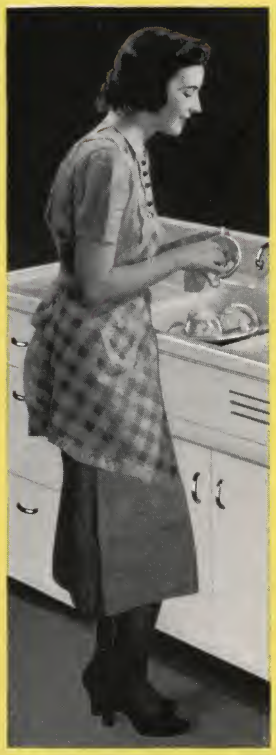


The cabinet provides ample storage space; and the counter has a linoleum top for ease in cleaning. Food may be passed across the counter to the table. Electrical outlets are provided. The cushioned seats are the last word in comfort and are removable, disclosing large storage space below.

Advantages OF CRANE MODERN SINKS



"Comfort angle" supply panel with swinging mixing spout giving tempered water and handy retractable rinsing spray. The safety ledge keeps glasses and cups out of harm's way. Two 8-inch deep compartments with stoppers are a great convenience.



The *Kitchen Queen* measures 36 inches from the floor to the rim—just the right height for comfort and to prevent fatigue from kitchen duties.



Recessed Center Panel provides knee room, permits correct posture.



No single item of equipment in the home gives greater service than the sink. A well designed, well built sink actually means countless hours saved in kitchen duties—a more pleasant, more comfortable home besides.

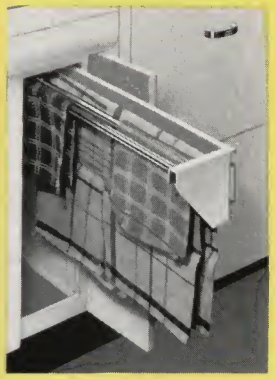
These sinks incorporate all those features that Crane research, under the direction of home economists, has proved desirable. Just the right height for comfort, 36 inches, Crane sinks make work easier. The gleaming finish of porcelain enamel on rigid cast iron is easily cleaned with a damp cloth.

The low height of the back, only 4 inches, permits installation below a window and the "comfort angle" control panel places all the fittings within easy reach of the fingers yet out of the way.

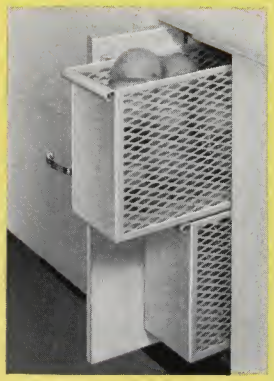
The cabinets under these sinks are of steel with a durable baked-on enamel finish and the subbase is recessed to give toe room.

Many conveniences are provided such as removable strainer in sink compartment to catch crumbs and fruit parings. A retractable spray to reach every corner of the sink is a great aid in cleaning vegetables and washing dishes; depressed drainboards and a safety ledge where glasses or cups may be placed.

Crane sinks are made in sizes and styles to suit every kitchen and every taste.



Sliding towel rack keeps towels and dishcloths out of the way—yet easily accessible.



Concealed by a small door are two removable containers for fruit or vegetables.



The 4-inch back permits windows to be lower.



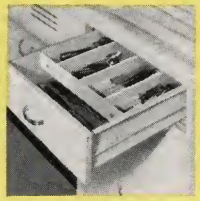
Cup strainer can be lifted out and emptied.



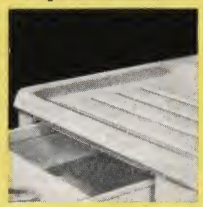
Recessed sub-base provides ample toe room.



Wood cutting board included. Upper drawers linoleum lined.



A sliding cutlery compartment in upper drawer.



Drainboards are depressed 1 inch.

Kitchen Queen "AMERICA'S FINEST SINK"



The big, roomy cabinet of steel with baked enamel finish has been designed for utmost efficiency. Here are two removable, ventilated containers to hold fruit and vegetables and a sliding towel rack to hold dishcloths and towels. Top right hand drawer has linoleum lined sliding cutlery tray. Top left hand drawer has removable wood cutting board. Both top drawers are linoleum lined. Four deep drawers are provided for storage. Space beneath the sink gives storage room and a wire utility rack is furnished for holding soap.

The black sub-base is recessed to give toe room. The patented recessed front panel provides space for the knees assuring correct posture and preventing fatigue.



A beauty in appearance—the *Kitchen Queen* is efficient and practical in service as well. Truly a luxurious sink, designed for the family which is satisfied only with the best.

A full 72 inches long, the *Kitchen Queen* has two large sink compartments—8 inches deep—convenient in dishwashing or food preparation and two depressed drainboards, so deep that water will not surge over the rim. The low back, only 4 inches high, permits installation below a window and the one-piece construction completely does away with any danger of water seepage.

Made of acid-resisting porcelain enamel on cast iron—the surface is easily cleaned and its gleaming beauty cannot be harmed by fruit or vegetable acids.

No. C 19070 length 72 inches, width 25¼", height from floor to rim, 36". No. C 19071-R with right-hand integral end or C 19071-L with left-hand integral end to fit in corner. C 19073 with two integral ends for recess installation. Also furnished less spray hose.

The *Kitchen Queen* can be furnished also with right-hand compartment designed for the installation of a General Electric waste "Disposall."

Kitchen Pride DOUBLE COMPARTMENT SINK



The *Kitchen Pride* is a compact, double compartment sink especially desirable for use with a continuous counter. The one-piece construction assures a water-tight, sanitary installation. Two compartments, 8 inches deep, are a great aid in food preparation or dishwashing. A "comfort angle" supply panel, swinging mixing faucet and rinsing spray are all convenient features. The *Kitchen Pride* has a low back, only 4 inches high, which facilitates installation below a window. Acid resisting porcelain enamel on cast iron, impervious to ordinary household acids.

Cabinets are of all-steel construction with durable baked enamel finish, chromium-plated hardware and black recessed sub-bases for toe room. May be had with C 19986 recessed front cabinet as illustrated or with C 19987 flush front cabinet having four shelves.

Size 38 x 25¼", 36" from floor to rim. Numbers with spray hose C 19083; less spray hose C 19084.

May be had also with right-hand compartment designed for the installation of a General Electric waste "Disposall."



Sunnyday EFFICIENT KITCHEN BEAUTY



For the home preferring a double drainboard sink with a single compartment —*Sunnyday* represents the most modern advance in sink design.

Sixty full inches of gleaming, acid-resisting porcelain enamel on cast iron in one piece, without insanitary cracks or crevices, and with rounded easy-to-clean corners. The four-inch back permits a lower window above the sink. Large capacity basin, eight inches deep, can be closed at outlet to serve as a dishwashing receptor. Drainboards are depressed.

A convenient swinging spout with mixing feature directs the water stream. The entire fixture operates from a "comfort angle" beveled panel back. An added convenience is the retractable spray which reaches every inch of the sink surface. With this sink, dish washing becomes a simple task.

Size 60 x 25¼", 36" floor to rim. C 19150 as illustrated. C 19151-L or R with left or right ends for corner installation. C 19153 with two ends for recess installation.

Sunnyday sinks can be furnished with enlarged outlet for use with General Electric Co. waste "Disposall."



The cabinet is of steel with a baked-on enamel finish—easy to clean. Hardware is chromium plated.

Space is provided below sink and may be used for storage or for refuse receptacle.

A linoleum lined sliding tray is provided in upper right-hand drawer. Both top drawers are linoleum lined.

Homemaker CONVENIENCE IN SMALL SIZE





The *Homemaker* is ideal for the small kitchen. This compact fixture has a single depressed drainboard to prevent water surging over rim, "comfort-angle" control panel, 8" deep basin, 4" high back to facilitate installation under window, safety drying-ledge for stemware. A swinging spout, and a removable cup strainer are also included. Made of acid-resisting porcelain enamel on cast iron, it provides a glistening, easily-cleaned surface.

Cabinets for the *Homemaker* are all-steel construction with durable baked enamel finish, chromium plated hardware and black recessed subbase for toe room.

Sizes 42 x 25¼" and 52 x 25¼", 36" floor to rim. C 19158-R with right or C 19158-L with left hand drainboard. For corner installations with 4" back extending around the ends on basin side only, specify C 19159-R for right hand corner or C 19159-L for left hand corner.

A Sink FOR EVERY HOME



Regardless of personal taste in kitchens, there is a Crane sink just designed to suit every home. In the complete Crane line you will find the sink you want, with cabinet or without, with single or double drainboards, to fit against the wall, below a window or in a corner. Crane makes sinks with one or two compartments, flat rim, roll rim or apron styles all of one piece construction and of one quality—the highest.

In planning a kitchen it will pay you to consider the step-saving efficiency a modern Crane sink will bring you. Consult your plumbing contractor who will be glad to help you choose just the right size and style of sink for your needs.



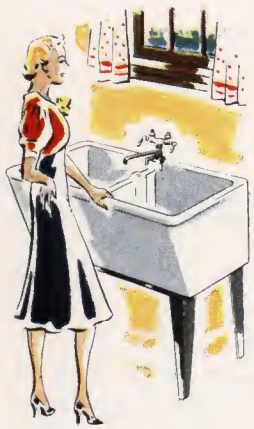
A roomy, efficient cabinet sink with 8″ high flat back, safety drain ledges, shallow groove drainboards and 8″ deep basin. Acid resisting porcelain enamel on cast iron. All steel baked enamel finish cabinet. Size 60 x 25¼″, 36″ high. C 19162.



A moderately priced sink of single drainboard type possessing many conveniences found only in more expensive styles. Large surface, 52 x 20″ or 42 x 20″ and a 6-inch deep basin. Back is 8 inches high. A roomy enameled steel cabinet provides ample space for storage, C 19230

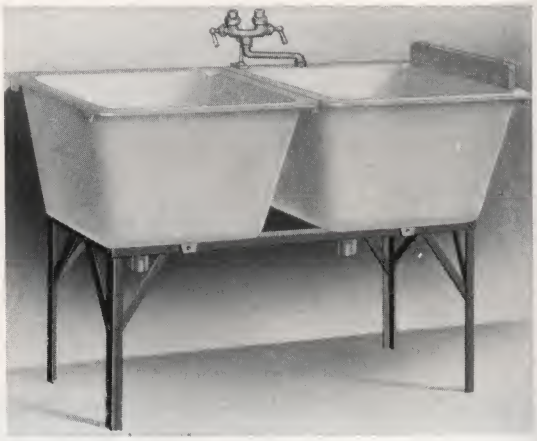


Single drainboard corner sink. Basin is 6 inches deep—height of back 8 inches. This may be furnished with an all steel storage cabinet if desired. Size 42 x 20″, 52 x 20″ or 52 x 22″. Can be furnished to set in right or left hand corner. C 19226.



Efficiency IN THE LAUNDRY

Correct equipment in the laundry saves time and makes work easier. Crane laundry tubs, the right height, the right depth, with hard, durable, easily cleaned surfaces, rounded corners and handy swinging faucets are a blessing on wash days. In glistening white, they are an attractive and important part of a cheerful, efficient laundry.

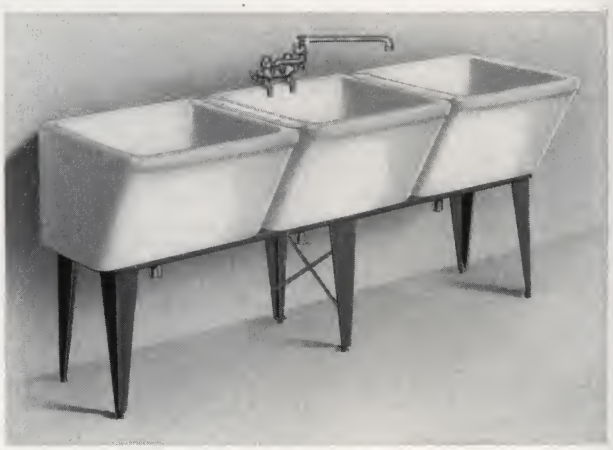


C 21253 Porcelain enamel inside, painted outside, cast iron flat rim tubs. Compartments 24 x 20″, 24 x 22″ and 25½ x 25¼″.

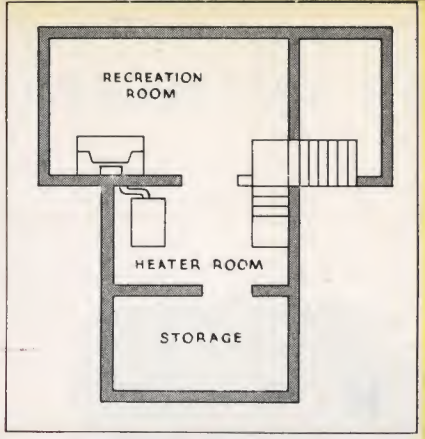


C 21129 Two-compartment Everbrite (all-clay) tub with shelf, glistening white, has handy shelf across back. Easy to clean. Sizes 40 x 27″.

C 21179 Battery of single compartment Everbrite (all-clay) laundry tubs; individual tubs 24 x 24 inches.









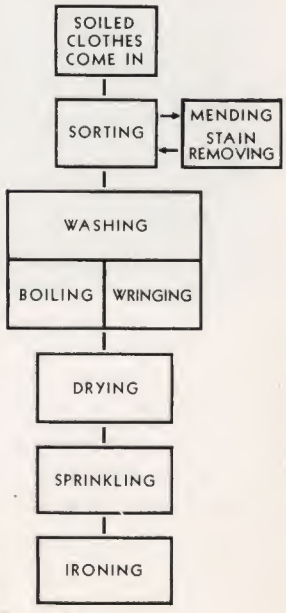
Better Basements THROUGH PLANNING

The general functions of the basement are ordinarily to house the heating plant and auxiliary equipment such as water heaters, water softeners, the laundry and storage space. In addition to this, it is an ideal place for a game room or recreation center.

In laying out the basement, the most desirable location of the boiler is the first point to determine. With this located, the remaining elements of the basement more or less naturally fall into their place. Your heating contractor can advise regarding the most suitable heating system for any particular requirement. For example, the greater headroom offered by a steam or hot water plant is often an important consideration in planning a usable recreation room. With a Crane Automatic Heating System a clean basement is assured regardless of the fuel burned, and it is possible to have a game room, work shop or recreation room in the basement. These, of course, may be designed, decorated and laid out to suit individual fancy. The laundry, whether in the basement or adjoining the kitchen, offers a splendid chance for functional planning. In the diagram at the right is shown how a step-saving laundry should be laid out. The clothes should move in a direct line from the time they enter the laundry until they leave. A well - equipped laundry must have ample laundry tray space. These laundry trays should be glistening white, easy to clean.



SAVING STEPS IN THE LAUNDRY



Crane Automatic Heating



When winter winds whine and the snow banks up in high drifts, it's pleasant to know that an Efficient Crane Heating System is guarding your happiness and your health—saving your fuel dollars for you as well.

With Crane Automatic Heating on the job you can take it easy with never a thought to tending furnace—the thermostat on the wall, set at the temperature you want maintained, tends the fire for you, automatically providing the correct amount of heat without a thought or care on your part.

Regardless of the fuel you wish to burn, whether it is coal or oil or gas, you will find just the boiler to suit your needs in the complete Crane line—a better boiler because it is engineered by Crane to burn the fuel it is designed for most efficiently.



The Crane Sustained Heat Boiler is equipped with the Crane Conservoil Burner. This burner possesses the famous floating flame which keeps the fire in complete suspension and enables the boiler surface to absorb all possible heat. The efficient design permits the burning of even the cheaper grades of fuel oils without waste or unpleasant odors.

The powerful long-lived motor drives pump and fan on the same shaft—this is the only moving part. Air movement is maintained at an even flow, assuring quiet combustion.

SUSTAINED HEAT BOILER BURNER UNIT



Unhampered by tradition, Crane engineers designed this complete packaged unit to heat the home most economically and efficiently using oil as a fuel.

The Sustained Heat Principle, exclusive with Crane, prevents the escape of heat when the burner shuts off. The trapped hot gases are confined at the top of the boiler and are conducted downward as they cool, released only when their heat has been utilized.

Incorporated in this boiler is the Crane patented baffle which controls water travel forcing it to flow over the heating surfaces counter current to the hot gases. This assures the water being heated quickly—efficiently. The Sustained Heat Boiler together with the burner is completely enclosed in a steel jacket which has a heavy green enamel finish baked on. It has an indirect water heater which will provide large quantities of hot water day and night, summer and winter at very low cost.



Basmor Boilers are available for steam, vapor and hot water heating systems and for large volume domestic hot water supply.

The Basmor is completely insulated to hold its heat and contains an excellent burner which requires no adjustment, is immune to backfiring and operates quietly, igniting quickly and smoothly. Basmor Boilers are green enameled and attractive, require little space, assuring a beautiful, cheery basement.

GAS-FIRED BOILERS



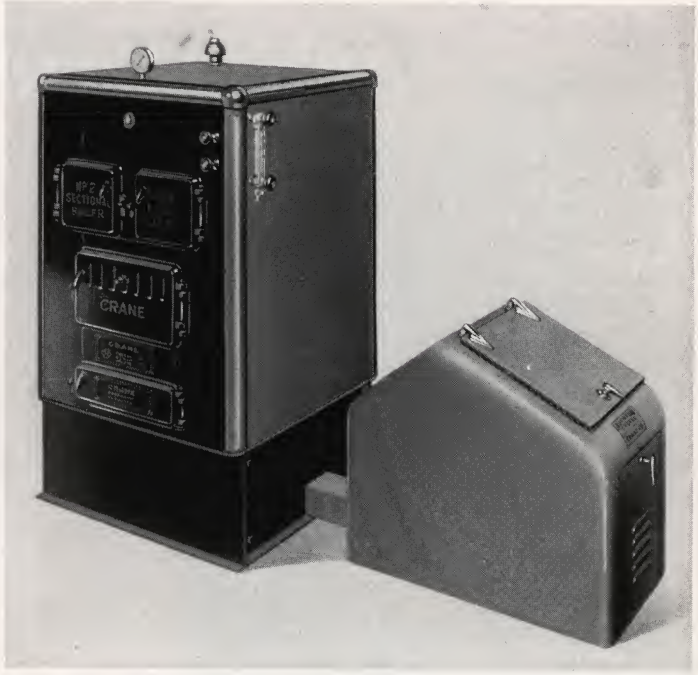
The Basmor meets every requirement of house heating and domestic water supply with either manufactured or natural gas. Safe and troublefree, its operation is completely automatic, convenient and economical. Basmor controls are designed to protect against every emergency—even against the failure of the controls themselves. High efficiency is attained through Basmor staggered finned construction by which heat waves are thrown backward and forward and sidewise, setting up a swirling or spiral motion that scrubs every square inch of heat-absorbing surface. There are three models in Basmor Boilers—Series 20, Series 25 and Series 40—the first for small homes, the second for average size homes, the third for larger homes and large scale heating requirements.

STOKER-FIRED BOILER



The NEW Crane Stoker-Fired Boiler will keep your home at a constant temperature automatically with very little attention from you. When you leave in the morning you may feel sure that your home will be comfortable all day long without any attention to the heating system. And at night you can keep a warm home—no need to jump out of bed, with the temperature below zero outside, to go down to the basement to tend furnace in the cold. Stoker firing assures complete combustion of the coal you burn, resulting in fuel economy. The reduction of dust and soot with the installation of a Crane Stoker-Fired Boiler means a clean, healthful home that guards your health and saves you trouble.

The Crane Stoker-Fired Boiler was designed especially for modern stoker firing. It possesses all those features that have made Crane Boilers the last word in heating satisfaction for years; and, in addition, it assures you the benefit from an automatic heating system with very little attention from you.



The Crane Stoker-Fired Boiler is designed for use with any standard stoker and will assure you the maximum in comfort and fuel saving. This boiler assures the maximum heat with low-cost stoker coal; and you will find that not only will your home be more comfortable but that you will save money on your coal bill as well. Due to its sectional construction this boiler is easy to erect in any basement and the green enameled jacket means a clean, attractive installation.

CRANE AUTOCOAL STOKER

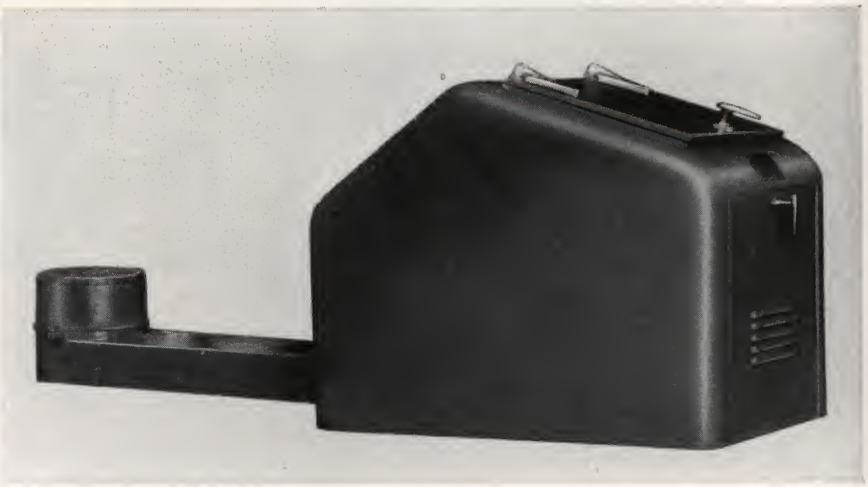


The *Autocoal* Stoker will give you the luxury of comfort, convenience, and an even temperature day and night, with freedom from work or worry.

The *Autocoal* controls every operation of your heating plant. You need only to set the controls, and coal is fed at just the right time and in the correct amounts to maintain the exact uniform temperature desired—and it does all this at very low cost.

The *Autocoal* Stoker, by proper combustion, obtains more heat units from the fuel; handles smaller sizes and cheaper grades efficiently; and by keeping temperature even, saves much fuel which would otherwise be wasted in the form of gases and smoke up the chimney.

The money saved in fuel burned as well as the convenience of stoker firing recommend the *Autocoal* for every coal burning installation.



The feed screw of the *Autocoal* Automatic Stoker forces the fuel from below into the hottest part of the fire. As the coal enters the fire zone it first gives off its volatile gases, which are burned BEFORE passing up the chimney; then it is converted into coke, which burns with intense heat, producing a fire-box temperature that is many times hotter than can be developed by hand-firing. The fire is automatically controlled by an efficient thermostat keeping the house temperature even at any pre-determined point.

Because of the principle of forced under-feed firing, combustion is so nearly complete that the smoke nuisance is eliminated, and there is no loose ash.

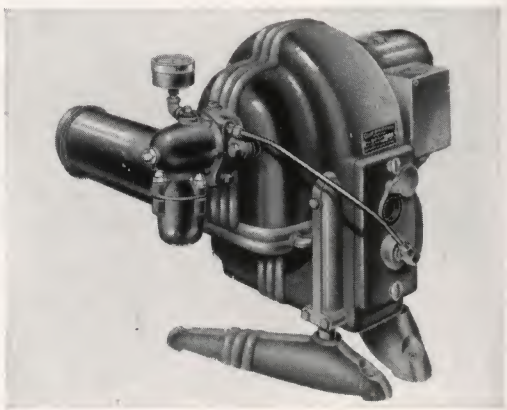
CONSERVOIL BURNER

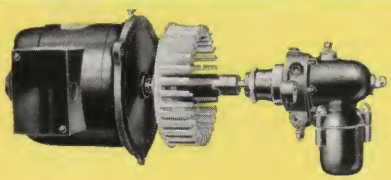
The *Conservoil* Burner possesses the famous floating flame which keeps the fire in complete suspension. The efficient design and simplified construction permit the burning of even the cheaper grades of fuel oil without waste, noise or unpleasant odors.

Designed for maximum simplicity, blower and air-control housing as well as the fuel unit mounting hub are cast in one single piece, guaranteeing perfect alignment of all parts.

The oil is introduced by the pump to the nozzle, where it is broken up into billions of fine particles which guarantee complete combustion.

This mist of oil and air is carried past the electrodes which are not in the direct path of the oil and therefore never become loaded with carbon. The high temperature of the rich spark ignites the oil and the famous floating flame results.

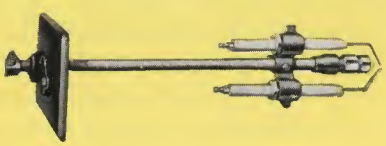




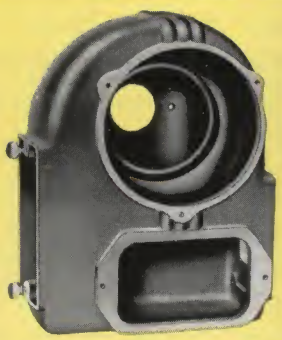
Here is the only moving part in the *Conservoil* Burner. The pump and fan are on one shaft, accurately balanced, silent in operation.

A new efficiency in electrodes —no danger of cracked insulators—points cannot foul as they are clear of the oil nozzle.





Controlled air delivery and air mixture without combustion noise—highly efficient, yet extremely simple.



A single casting houses the *Conservoil* Burner, assuring perfect alignment and interchangeability of all parts.

FIN-TYPE OIL BURNING BOILER



The Crane Fin-Type Boiler can be furnished with an indirect water heater which is concealed below the jacket and will deliver ample quantities of hot water day or night—summer or winter. This is an easy solution to the problem of water heating in the home.



Luxurious heat—a comfortable, healthful home this winter and for many winters to come, without lifting your finger—this is possible with the New Crane Fin-Type Boiler.

The last word in boiler design—the Fin-Type was engineered for efficient and economical burning of oil. The extra long flues, cast with myriads of fins, trap the heat in the gases—absorb more heat—assure a high boiler efficiency.

All sections of the Fin-Type Boiler are machine-ground, assuring a close, tight fit. This prevents escape of gases and the infiltration of air. The back section is curved for added strength.

The Crane patented water baffle directs the water travel across the top of the combustion chamber giving greater efficiency—saving fuel.

In steam boilers the water line is carried one-third of the way into the large push nipple at the top which provides continuous water circulation throughout the boiler when an indirect water heater is used.

The handsome metal jacket has a heavy corrugated asbestos insulation keeping the heat inside—assuring a boiler so cool you can keep your hand against it at any time.

CRANE BOILERS



Crane Boilers are made in both square and round styles. Inexpensive in original cost, they are scientifically designed and tested to save fuel dollars. These efficient heating plants force the combustion gases through the flues back and forth until every available bit of heat is transmitted to the water. Air bubbles which form on the inside of water sections actually insulate against the heat thereby wasting fuel. Crane Boilers include patented baffle which speeds the flow of water scrubbing the bubbles away, utilizing all the heat from the fuel. Soot is another form of insulation wasting money and delaying boiler action. By an ingenious arrangement of flues and large cleanout doors the soot in Crane Boilers is easily scraped off into the fire without a bit of dirt getting into the basement. The handsome two-tone green jacket is heavily insulated with asbestos which ends heat loss. Made in sizes to suit every home, and easily and quickly installed.

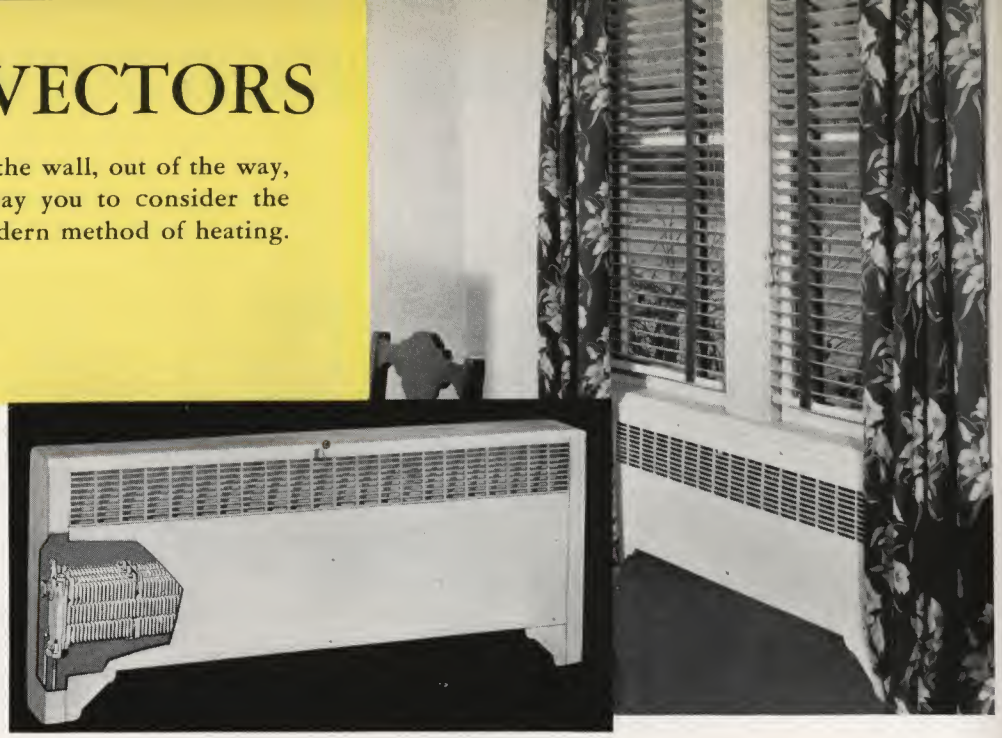


Crane Boilers are made in both sectional and round types in a wide variety of sizes suitable for any home. They may be had for steam, vapor and hot water systems.

CRANE CONVECTORS

Convection Heating is concealed in the wall, out of the way, yet efficient and practical. It will pay you to consider the advantages to your home of this modern method of heating.





The most modern, efficient and convenient form of heating is with the NEW Crane Convectors. Concealed in the wall where they are out of the way, Crane Convectors deliver a constant current of heated air into the room, removing the cold air at the same time.

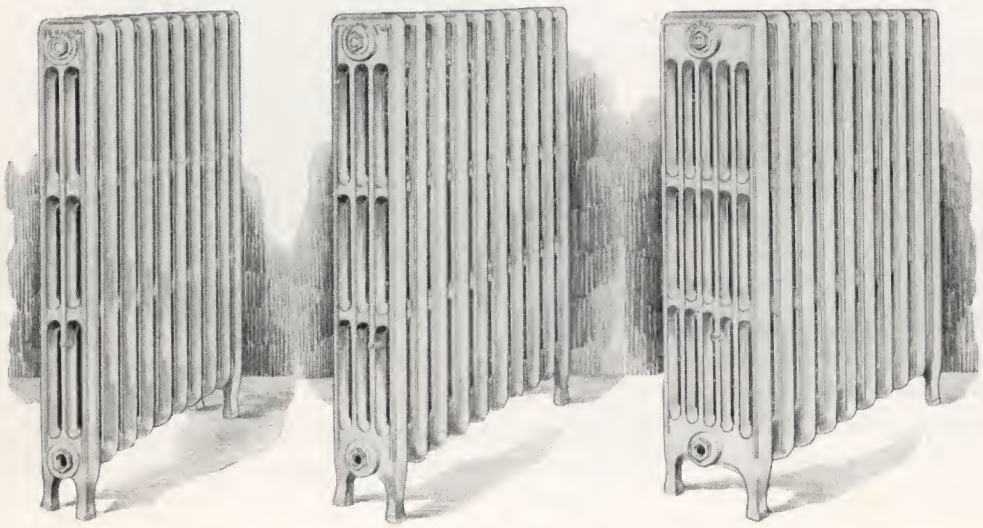
With the new Crane Enclosures, added beauty accompanies the efficiency of concealed convector heating. The front of the convector enclosure presents a flat surface. And the grille itself is a noted Crane innovation—a contribution to better home interiors. Of beautiful, durable plastic, it is available in a wide range of colors on special order and adds just the right note of modern smartness to any room. The enclosures are stamped from heavy steel to give a lifetime of service and may be finished to harmonize with any room decorative treatment.

The large-finned cast iron Crane Convector is responsible for the heating efficiency of the whole unit. The fins, integrally cast, eliminate leaks and noise. Can be had for steam, vapor, vacuum or hot water systems. Convectors are 6 inches high and may be had in any length from 13 or 18 inches to 100 inches in steps of 2½ inches. Will fit into any size room or available wall space.

CRANE RADIATORS

Crane Radiators typify the maximum in modern heating construction. Compact and symmetrical, they are designed for beauty and efficiency and are quickly and easily cleaned.

The Crane Radiator assembly method assures tight joints, greater economy of space and increased strength. It means longer life and satisfactory service because the tube sections are permanently joined. Made in 2, 3, 4, 5, 6 and 7 tube styles in a wide variety of heights suitable for any installation.



In designing Crane cast iron radiators, consideration was given to the shape of the tubes to provide greater heating surface and increase radiation. Sufficient space was allowed between the tubes to make cleaning easy. The slim columns and clean vertical lines present a well-proportioned symmetry.

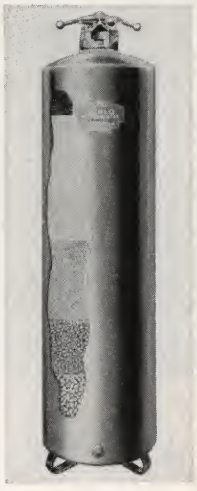
Crane direct radiators are made in many styles and sizes—low ones to go under windows, wall and ceiling radiators, special space-saving types for bathrooms, even radiators without legs, if desired. They range from 14 to 38 inches in height and are made two, three, four, five, six or seven tubes wide.



CRANE WARLO WATER CONDITIONING



No matter what its source — municipal, private well, river, lake, spring or cistern—several things may be wrong with the water you use. It may be discolored, it may have a disagreeable taste or odor, it may be hard, corrosive or actually dirty. In TODAY'S home, people have automatic heat—they have conditioned air—but the problem of water and its quality is equally important.



A few facts worth considering are really astonishing: The water used by the average home owner shortens the life of clothes, increases the cost of heating, harms the complexion and even makes vegetables tough and less appetizing.

We will make water analyses without obligation and recommendations will be cheerfully given. Without definite knowledge of your water supply, you may needlessly pay for that mistake for years.

Whatever your problem there is a Crane Warlo unit to fit your needs. All are simple to operate and require a minimum of attention. Be sure to consider well this added convenience that actually pays for itself.

CRANE GAS AND ELECTRIC WATER HEATERS



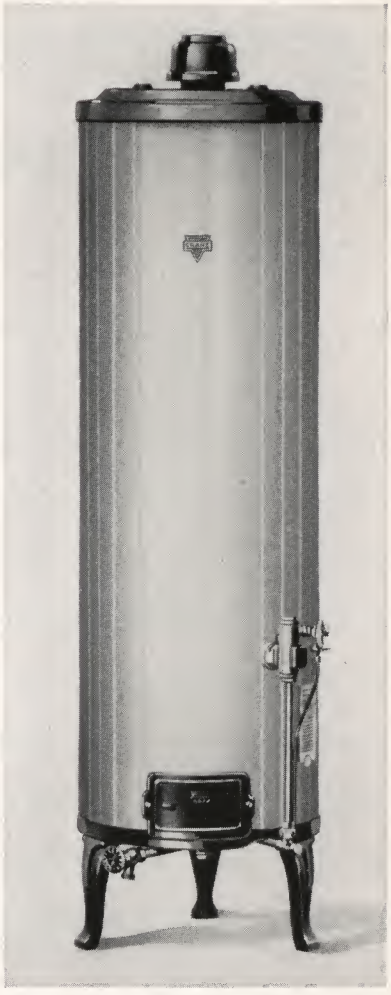
Hot water—piping hot—all you want any time night or day—no delay—just turn the faucet—that is a convenience made possible by a Crane Water Heater—either gas or electric.

Steaming hot water helps in dishwashing, aids in the laundry, encourages the habit of cleanliness with the children. An abundant supply saves the annoyance of finding the water running cold just when it is needed most. And when sickness strikes, having hot water waiting even in the dead of night is a blessing. A hot shower instantly ready is a luxury made possible with a Crane Water Heater.

Fortunately, the luxury of such hot water service is economical. Crane Water Heaters are more careful of gas or electric bills than you could be. The gas shuts off the instant the water reaches the exact degree determined. It turns on the split-second it is needed. The operation is thrifty, as only a fully automatic, fully insulated water heater could be.

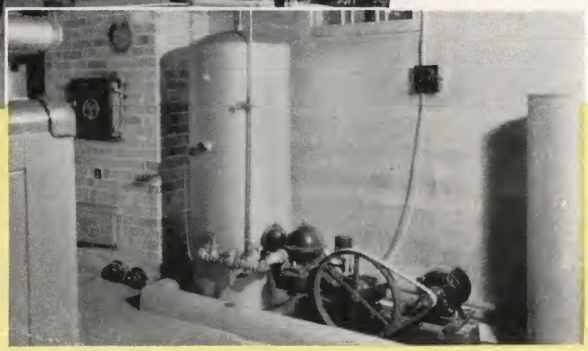
There are styles, prices, and sizes of Crane Water Heaters for every home. Get complete information about them before you decide.

ALL THE HOT WATER YOU WANT WHEN YOU WANT IT









A PLENTIFUL SUPPLY OF WATER WHEN YOU NEED IT IN CITY, SUBURB OR COUNTRY

Running water—lots of it, at the turn of a faucet—is a convenience now considered a necessity to modern civilization. No matter where you are—what your source of supply—spring or lake, deep well or river—a Crane-Equipped pumping system will assure you ample quantities and bring to you all those conveniences running water can give. In rural communities, on farms and in small towns, in summer cottages and filling stations, or resorts, the necessity of running water is obvious—a necessity filled automatically and economically by a Crane pump.

Just as important is the adaptation of Crane pumps to homes in larger communities already supplied with a water system. Here, particularly during the summer months, pressure often falls, and water is difficult to obtain, particularly above the first floor. A Crane Booster pump in the basement will not only provide increased quantities of water, but will assure adequate supplies throughout the house on all floors. This service is particularly important in homes of more than one story and in new communities where large-scale building has overtaxed the water supply.

CRANE CO.

PRICE GUIDE

"FOR THE HOME OF TODAY"

CIRCULAR AD-1271—MAY, 1938

Prices given below will be helpful in approximating costs, or comparing the cost of one fixture with another. They do not include piping, labor, and other installation costs. For complete price, consult your plumbing or heating contractor.

Fixtures in color can be furnished in a choice of the following Crane colors:

No. 400-A Orchid Pink
No. 405 India Ivory
No. 410 Citrus Yellow
No. 415-A Pale Jade
No. 425-A Lucerne Blue
No. 450 Black
No. 485 Persian Red
No. 495 Sun Tan

BATHROOMS

(Page 3)	Size	White	Color
C 128 *Neuvogue* Lavatory	27x22″	$95.50	$115.30
C 10384 *Siwelclo* Closet		59.75	89.45
C 3240-LV33 *Neuvogue* Bath	5′	78.15	99.80
	5½′	83.90	108.25
For acid-resisting tub, Add	5′	7.00	
	5½′	7.80	
Neuvogue Shower and Accessories		Appl.	
(Page 4)			
C 172 *Corwith-Compeer* Lavatory	22x18″	47.70	62.50
	27x22″	58.40	81.30
C 1213 *Corwith* Dental Lavatory	16x15″	33.90	44.70
C 10482 *Monada* Closet		54.20	83.45
C 3225-LB91 *Neuvogue* Bath	5′	*77.00	*101.00
*Less Curtain	5½′	*84.00	*111.15
For acid-resisting tub, Add	5′	7.75	
	5½′	8.75	
Accessories		Appl.	
C 174 *Cromwell* Lavatory	26x14″	43.80	59.50
C 180-E12 *Sterling* Lavatory	20x18″	44.55	58.80
	24x21″	46.45	62.10
C 654 *Hermitage* Lavatory	20x13½″	26.80	37.40
	26x13½″	29.50	42.15
C 684 *Ipswich* Lavatory	17x17″	31.80	47.65
(Page 5)			
C 221-L11T *Corwith* Lavatory	24x21″	58.75	80.00
	27x22″	67.65	95.60
	30x24″	88.80	132.90
If less towel bars, Deduct		6.25	6.25
C 10541 *Santonia* Closet		44.65	66.70
C 3284-LC99 *Corwith* Bath	5′	*78.30	*100.15
*Less Curtain	5½′	*84.75	*109.40
For acid-resisting tub, Add	5′	7.00	
	5½′	7.95	
Accessories		Appl.	
C 281 *Coronet* Lavatory	24x20″	58.15	74.40
C 1991 *Coronada-Lavinet* Lavatory	24x20″	39.00	42.00
C 2158 *Rhodile* Lavatory	20x18″	34.65	37.20
For towel bars with Cabinet Lavatories, Add...Each		1.00	1.00
C 2151 *Rhodile* Lavatory	20x18″	21.90	24.50
C 2372 *Closin* Lavatory	26x14″	20.45	

BATHROOMS

(Page 6)	Size	White	Color
C 138-L12 Design 40 *Corwith* Lavatory	24x21″	$ 94.25	$107.00
	27x22″	103.70	122.55
	30x24″	126.30	159.90
	33x24″	144.45	189.90
	36x24″	162.55	219.75
	42x24″	189.65	264.50
C 1213 *Corwith* Dental Lavatory (Design-40)	16x15″	52.55	53.40
C 10384 *Siwelclo* Closet		59.75	89.45
C 3220-LH73 *Marshall* Bath	5½′	177.30	197.30
(Incorrectly listed as C 3220-LH51) Partition and Accessories		Appl.	
C 2500 *Neuday* Lavatory	19x17″	20.40	22.50
C 2502 *Neuday* Lavatory	19x17″	32.30	34.40
C 2504 *Neuday* Lavatory	19x17″	33.75	36.75
If with Towel Bars, Add...Each		1.00	1.00
(Page 7)			
C 138-L12 *Corwith* Lavatory, with *Rival* Legs and *Handy* Towel Bars (Incorrectly listed as C 1311-L11)	24x21″	56.25	69.00
	27x22″	65.70	84.55
	30x24″	88.30	121.90
	33x24″	106.45	151.90
	36x24″	124.55	181.75
	42x24″	151.65	226.50
C 1213 *Corwith* Dental Lavatory	16x15″	33.90	44.70
C 10490 *Manor* Closet		47.50	76.20
C 3240-LC99 *Neuvogue* Bath	5′	*74.55	*96.20
*Less Curtain	5½′	*80.75	*105.10
For acid-resisting tub, Add	5′	7.00	
	5½′	7.80	
Accessories		Appl.	
C 259 *Norwich* Lavatory	24x21″	42.00	61.40
	27x22″	50.00	75.50
C 1995 *Corwith* Lavatory	24x20″	33.90	37.30
	27x22″	46.00	52.80
If with Towel Bars, Add		5.00	5.00
C 2005 *Corwith* Lavatory	24x20″	34.80	41.00
	27x22″	47.00	56.50
(Page 8)			
C 172 *Corwith-Compeer* Lavatory	22x18″	47.70	62.50
	27x22″	58.40	81.30
C 11000 *Merit* Closet		33.00	51.90
C 3308-LB93 *Corwith* Bath	5′	*64.25	*84.00
*Less Curtain	5½′	*69.70	*91.85
For acid-resisting tub, Add	5′	6.30	
	5½′	7.15	

All prices are subject to change without notice

BATHROOMS

BATHROOMS—Continued (Page 8)	Size	White	Color
C 3336-C27 *Tarnia* Bath	5′ x32″	$47.50	$63.55
	5½′x32″	55.05	74.65
For acid-resisting tub, Add	5′	5.20	
	5½′	6.30	
C 3370-LC27 *Verna* Bath	5′	52.50	
	5½′	57.80	

(Page 9)	Size	White
C 3442-N60 *Doris* Bath	5′	$28.50
C 11004 *Hanover* Closet		25.50
C 11145 *Neuton* Closet		18.85

SHOWERS (Page 11)	Size	Chromium Plated
C 4364-B Mixing Valve		$ 19.85
C 4403-B Twin Valve		13.00
C 4420-BA Thermostatic		116.70
C 4871-B *Economy* Head		1.80
C 4875-B *Refreshor* Head		2.20
C 4712 Compartment (Regularly furnished in white)	30x76″	*69.55
	32x76″	*88.75
	36x76″	*94.05
Corner Type	36x76″	*104.70
*F.O.B. Elkhart, Ind.		
C 5090 Rubberceptor	36x36″	31.90

CRANE CHINA ACCESSORIES (Page 12)	Size	White	Color
C 24925 Square Towel Bar	⅞x18″	$2.65	$3.95
	⅞x24″	3.00	4.50
	⅞x30″	3.40	5.05
	⅞x36″	3.70	5.60
C 24932 Tumbler Holder	3½x3⅜″	1.15	2.00
C 24935 Combination Holder	3½x4⅞″	1.40	2.75
C 24940 Soap Dish	3⅜x4⅞″	1.65	3.25
C 24956 Paper Holder		1.70	3.55
C 24960 Robe Hook		.70	1.15
C 24970 Recess Soap Holder	6x6″	1.50	2.70
C 24975 Combination Soap Holder	6x6″	2.25	3.70
C 24984 Recess Paper Holder	6x6″	1.65	2.70

SIMPLICITY ACCESSORIES	Size	Crystal	Black	Metal
C 25112 Shelf	⅝x18″	$4.50	$5.70	
	⅝x24″	4.70	6.40	
	⅝x30″	5.00	7.10	
C 25113 Square Towel Bar	¾x18″			$4.00
	¾x24″			4.30
	¾x30″			4.70
C 25117 Vertical Grab Bar	18″			4.20
	24″			4.80
	36″			6.00
C 25122 Paper Holder, Metal Roller				3.90
Wood Roller				2.90
C 25125 Toothbrush Holder				1.50
C 25140 Recess Combination Soap Holder				5.40
C 25142 Recess Paper Holder, Metal Roller				5.20
Wood Roller				4.20

CABINETS

CABINETS (Page 13)	Size	Price
C 26888 *Copley*	20x26″	$75.00
C 26895 *Framed Venetian* (Incorrectly listed as C 26894)	16x24″	17.90
	18x26″	22.40
	18x30″	24.50
	20x32″	29.30
C 26902 *Framed Simplicity* (Incorrectly listed as C 26903)	16x22″	15.80
	18x24″	20.30
	18x27½″	22.00
	20x30″	25.90

KITCHEN SINKS (Page 16) Cabinets regularly furnished white or ivory F.O.B. CHICAGO, ILL.	Size	White	Color
C 19070 *Kitchen Queen*	72x25″	$168.40	$189.90
C 19071 L or R *Kitchen Queen*	72x25″	170.90	193.10
C 19073 *Kitchen Queen*	72x25″	173.40	196.20
For Colored Cabinet, Add		6.25	6.25
If less Transfer Valve, Hose and Spray, Deduct		2.75	2.75
C 19083 *Kitchen Pride* with C 19986 Cabinet	38x25″	88.45	97.65
For Colored Cabinet, Add		3.30	3.30
C 19083 *Kitchen Pride* with C 19987 Cabinet	38x25″	75.95	85.15
For Colored Cabinet, Add		2.40	2.40
If less Transfer Valve, Hose and Spray, Deduct		2.75	2.75
(Page 17)			
C 19150 *Sunnyday*	60x25″	114.60	128.90
C 19151 *Sunnyday*	60x25″	117.10	132.10
C 19153 *Sunnyday*	60x25″	119.60	135.25
For Colored Cabinet, Add		4.00	4.00
C 19158 L or R *Homemaker*	42x25″	77.70	86.20
	52x25″	91.20	110.70
C 19159 L or R *Homemaker*	42x25″	80.20	89.40
	52x25″	93.70	113.90
For Colored Cabinet, Add		3.15	3.15
(Page 18)			
C 19162 *Sunnyside*	60x25″	108.00	122.40
For Colored Cabinet, Add		4.00	4.00

	Size	White		Color
		Regular	Acid-Res.	Acid-Res.
C 19226 L or R	42x20″	$36.25	$39.70	$47.05
	52x20″	44.15	48.75	58.55
	52x22″	47.25	52.40	63.15
If with C 19956 white or colored cabinet, Add	42x20″	31.25		
	52x20″	34.70		
	52x22″	34.70		
C 19230 L or R Cabinet sink less all trimmings	42x20″	37.20	38.40	
	52x20″	47.20	48.80	

LAUNDRY TUBS	Size	White
C 21129 Everbrite Laundry Tub	40x27″	*$43.15
C 21179 Everbrite Laundry Tub, 3-part	24x24″	*70.65
*F.O.B. Trenton, N. J.		
C 21253 Enameled Laundry Tub, 2-part	24x20″	29.00
	24x22″	33.00
	25x25″	50.75
For acid-resisting enamel, Add	24x20″	3.00
	24x22″	3.50
	25x25″	6.25

All prices are subject to change without notice

CRANE HEATING EQUIPMENT

(Pages 20 to 25)

For Prices on Crane Boilers, Radiators and Water Heaters, Refer to your Crane Plumbing or Heating Contractor.

CRANE WARLO WATER SOFTENERS

(Page 25)

ST-11 (11,000 Grain Capacity)	*$66.00
BT-11 with Brine Tank (11,000 Grain Capacity)	*83.00
ST-20 (20,000 Grain Capacity)	*86.00
BT-20 with Brine Tank (20,000 Grain Capacity)	*104.00

*F.O.B. Birmingham, N. J.

CRANE PUMPS AND WATER SYSTEMS

(Page 27)

Shallow Well Pumps with Motor and Pressure Switch only:

K250	*$47.50
K375	*52.00
S-80	*147.00
S-100	*160.00

CRANE PUMPS AND WATER SYSTEMS—Continued

(Page 27)

Shallow Well Pumps with Motor, Pressure Switch and Cushion Tank for Direct Water Systems:

K250-FW	*$52.00
K375-FW	*56.50

Shallow Well Water Systems, Complete with 42 Gal. Storage Tank, Electric Motor, Relief Valve, Pressure Switch and Fittings:

K250-A	*67.00
K375-A	*71.50
S-80-A	*167.50
S-100-A	*180.50

Deep Well Pumps with Motor and Complete Drive:

D-6 with ½ H.P. Motor	*96.50
D-9 with 1 H.P. Motor	*182.50

Deep Well Pumping Systems, Complete with 42 Gallon Tank:

D-6-A	*125.00
D-9-A	*216.00

*F.O.B. Chicago, Ill.

CRANE CO.

VALVES, FITTINGS, FABRICATED PIPE, HEATING AND PLUMBING MATERIAL

GENERAL OFFICE

836 S. Michigan Avenue, Chicago

MANUFACTURING PLANTS

Chicago • Bridgeport • North Tonawanda, N. Y. • Chattanooga • Trenton

(See next page for nearest Crane display room)

All prices are subject to change without notice

AD-1271—PRINTED IN U. S. A.—5-38—65M



AN INVITATION

To simplify the selection of plumbing and heating products for your new home Crane Co. cordially invites you to visit its display rooms. Here you will find the latest fixtures, attractively displayed, and representatives in attendance who will be pleased to advise you. Ask your architect or your contractor to take you to the nearest Crane display room in any of the following cities:

ALABAMA

BIRMINGHAM 2 So. Twentieth St.
MOBILE 300 N. Royal St.
MONTGOMERY (Teague Hardware Co.) 132 Commerce St.
TUSCALOOSA (Cole Supply Co., Ltd.) 520-22 22nd Ave.

ARIZONA

PHOENIX 233 S. First Ave.
TUCSON 35 Toole Ave.

ARKANSAS

FT. SMITH 521 S. Ninth St.
LITTLE ROCK 515 E. Second St.

CALIFORNIA

FRESNO (Barrett Hicks Wholesale Sup. Co.) 1027 Broadway St.
HOLLYWOOD 950 N. Highland Ave.
LONG BEACH 824 W. Anaheim St.
LOS ANGELES 321 E. Third St.
OAKLAND 346 Ninth St.
PASADENA 321 South Broadway
SACRAMENTO 1227 Front St.
SALINAS (Standard Supply Co.)
SAN BERNARDINO 110 South "E" St.
SAN DIEGO 1138 India St.
SAN FRANCISCO 301 Brannan St.
SANTA ANA 919 Poinsettia St.
SANTA BARBARA 136 State St.

COLORADO

DENVER (Crane-O'Fallon Co.) . . 1631 Fifteenth St.
GRAND JUNCTION (Crane-O'Fallon Co.) 601 Pitkin Ave.
PUEBLO (Crane-O'Fallon Co.) . . . 216 W. Third St.

CONNECTICUT

BRIDGEPORT 302 John St.
HARTFORD 710 Windsor St.
NEW HAVEN 365 Orchard St.

DELAWARE

WILMINGTON (Desco Corporation) . . 211 Shipley St.

DISTRICT OF COLUMBIA

WASHINGTON 1018 Connecticut Ave.

FLORIDA

JACKSONVILLE 1007 W. Bay St.
MIAMI 85 N. W. Tenth St.
MIAMI BEACH 1030 Lincoln Road
PANAMA CITY (Panama Machine & Supply Co.)
ST. PETERSBURG (Moon Supply Co., Inc.) 2000 S. Second Ave.
TAMPA 1405 Twiggs St.
WEST PALM BEACH 601 Lantana Ave.

GEORGIA

ATLANTA Washington St. Viaduct
AUGUSTA (H. C. Tennent Supply Co.) 1251 Broad St.
COLUMBUS (Columbus Iron Works) . . 901 Front St.
MACON 500 Broadway
SAVANNAH 14 W. Broad St.

IDAHO

BOISE 415 S. Eighth St.
POCATELLO 756 S. First Ave.

ILLINOIS

AURORA 544 S. Lake St.
CHICAGO 836 S. Michigan Ave.
EVANSTON 1224 Emerson St.
JACKSONVILLE (Jacksonville Supply Co., Inc.) 607-611 E. State St.
PEORIA (Connor Co.) 205-211 S. Water St.
ROCKFORD 800 S. Main St.
SPRINGFIELD 921 E. Monroe St.
WAUKEGAN 1219 Glen Rock Ave.

INDIANA

EAST CHICAGO 1004 Chicago Ave.
EVANSVILLE 118 S. E. Eighth St.
INDIANAPOLIS 333 W. Market St.
MUNCIE 610 S. Jefferson St.
SOUTH BEND 1616 S. Franklin St.
TERRE HAUTE 209 Ninth St.

IOWA

DAVENPORT 217 E. Second St.
DES MOINES (L. H. Kurtz Co.) . 312-314 Walnut St.
DUBUQUE (Kretschmer-Tredway Co.) 9th & Washington Sts.
MASON CITY 19 Eighth St., S. E.
SIOUX CITY 6th and Nebraska Sts.

KANSAS

LEAVENWORTH (Tholen Bros. Supply Co.) 304-312 Shawnee St.
WICHITA 624 E. First St.

KENTUCKY

ASHLAND (Ben Williamson & Co., Inc.) 1539 Greenup St.
LEXINGTON 544 W. Main St.
LEXINGTON (Brock-McVey Co., Inc.) Shreve & Vine Sts.
LOUISVILLE (Laib & Co.) 754 S. First St.
PADUCAH (Henry A. Petter Supply Co.) 117-119 S. First St.

LOUISIANA

BATON ROUGE (Levingston Supply Co.) 1449 Florida St.
NEW ORLEANS 146 Baronne St.
SHREVEPORT 1320 Winston St.

MAINE

PORTLAND 70 St. John St.

MARYLAND

BALTIMORE 17 W. Franklin St.
CUMBERLAND (Tri State Mine & Mill Sup. Co.) 310 Commerce St.

MASSACHUSETTS

BOSTON 48 W. First St., South Boston
PITTSFIELD (Pittsfield Mill & Plbg. Supply Co.) 81 Clapp Ave.
SPRINGFIELD 60 Cypress St.
WORCESTER 45 Green St.

MEXICO

MONTERREY, NUEVO LEON (Instalaciones Sanitarias, S. A.)

MICHIGAN

DETROIT 4498 Cass Ave.
FLINT 155 Lewis St.
GRAND RAPIDS 56 Grandville Ave., S. W.
JACKSON 409 Hupp Ave.
KALAMAZOO (Bond Supply Co.) . . . 249 N. Rose St.
MUSKEGON (J. J. Howden Co.) 370-374 W. Western Ave.

MINNESOTA

DULUTH 102 Lake Ave., S.
MANKATO 510 S. Pike St.
MINNEAPOLIS 400 Third Ave., N.
MINNEAPOLIS (Goodin Co.) 707 N. Third Ave.
ST. PAUL 356 Broadway

MISSISSIPPI

HATTIESBURG (P. S. Supply Co.) 404-406 E. Pine St.
JACKSON 176 N. Gallatin St.
MERIDIAN (General Supply & Machine Co.) 208 19th Ave.

MISSOURI

KANSAS CITY 1532 Grand Ave.
KIRKSVILLE (Kirksville Plumbing Supply Co.) 406 W. Harrison St.
ST. LOUIS 30 S. Sixteenth St.

MONTANA

BILLINGS 30th St. and First Ave., S.
GREAT FALLS Great Northern Ry. Yards

NEBRASKA

GRAND ISLAND 115 E. Front St.
LINCOLN 317 S. Ninth St.
OMAHA 309 S. Nineteenth St.

NEVADA

RENO 401 E. Fourth St.

NEW HAMPSHIRE

LACONIA (Laconia Plbg. & Htg. Supply Co.) 77 New Salem St.

NEW JERSEY

ATLANTIC CITY (National Exhibit Rooms) 2401 Boardwalk
CAMDEN 134 Federal St.
NEWARK 90 South St.
TRENTON 50 Escher St.

NEW MEXICO

ALBUQUERQUE (Crane-O'Fallon Co.) 612 N. First St.

NEW YORK

ALBANY North Broadway
BINGHAMTON 21 Washington St.
BUFFALO 201 Church St.
HEMPSTEAD 209 Main St.
NEW YORK 279 Madison Ave.
ROCHESTER 200 South Ave.
SYRACUSE 760 W. Genesee St.
UTICA 326 Broad St.
WHITE PLAINS 41 Hamilton Ave.

NORTH CAROLINA

ASHEVILLE 34 Battery Park Pl.
CHARLOTTE 1307 W. Morehead St.
GREENSBORO 205 Lyndon St.
WILMINGTON (Longley Plbg. Supply Co.) 206-208 S. Front St.

NORTH DAKOTA

FARGO 636 Northern Pacific Ave.

OHIO

CANTON 210 Piedmont Ave., S. E.
CINCINNATI 824 Broadway
CLEVELAND 6215 Carnegie Ave.
COLUMBUS 67 N. Front St.
LIMA 207 S. Central Ave.
TOLEDO (Federal Pipe & Supply Co.) Shepard, Jackson & 11th Sts.

OKLAHOMA

MUSKOGEE 302 Commercial St.
OKLAHOMA CITY 705 W. Main St.
TULSA 623 E. Third St.

OREGON

PORTLAND 1103 S. W. Alder St.
PORTLAND (Peerless-Pacific Co.) 308-14 Front Ave., S.W.

PENNSYLVANIA

ALLENTOWN (Hertz Supply Co.) 1210-1214 Turner St.
CHESTER (Desco Corporation) . . . 2nd & Welsh Sts.
ERIE (Erie Concrete & Steel Supply Co.) 1301 Cranberry St.
NEW CASTLE (Lawrence Supply Co.) 19 W. Lawrence St.
PHILADELPHIA 1301 Locust St.
PITTSBURGH Gulf Building
PITTSBURGH (Malone Plumbing Supply Co.) 21st and Wharton Sts.
READING 212 S. Eighth St.
UNIONTOWN (S. E. Williams Supply Co.) 72 E. Main St.
WILLIAMSPORT (Hoff Wilkinson Co.) . 434 Court St.
WILKES-BARRE (Luzerne Lackawanna Supply Co.) 20 N. Pennsylvania Ave.
YORK (Careva Company Inc.) . . 545 E. Princess St.

RHODE ISLAND

PROVIDENCE 245 W. Exchange St.

SOUTH CAROLINA

CHARLESTON (C. D. Franke Co., Inc.) 170-172 Meeting St.
GREENVILLE 223 W. McBee Ave.

SOUTH DAKOTA

ABERDEEN 324 Railroad Ave., S. E.
SIOUX FALLS 326 E. Eighth St.

TENNESSEE

CHATTANOOGA 1317 Chestnut St.
KINGSPORT (Dobyns-Taylor Hardware Co.) 116-120 Broad St.
KNOXVILLE 523 W. Jackson Ave.
MEMPHIS 254 Court Ave.
NASHVILLE 532 Eighth Ave., S.

TEXAS

AMARILLO (Morrison Supply Co.)
AUSTIN (Donnelly-White Co.) 309 Lavaca St.
BEAUMONT 820 Fannin St.
CORPUS CHRISTI 1212 Gavilan St.
DALLAS 814 Young St.
DENISON (Chris Waltz) . . 201-203 W. Woodard St.
EL PASO (Crane-O'Fallon Co.) 1609 Texas St.
FT. WORTH (Morrison Supply Co.)
HARLINGEN 201 West "C" St.
HOUSTON 2205 McKinney Ave.
SAN ANTONIO 1200 E. Houston St.
SWEETWATER (Morrison Supply Co.)
WICHITA FALLS (Morrison Supply Co.)

UTAH

OGDEN Twentieth St. and Wall Ave.
SALT LAKE CITY 307 W. Second St.

VIRGINIA

NORFOLK 2 E. Twenty-second St.
RICHMOND 1223 W. Broad St.

WASHINGTON

SEATTLE 419 Second Ave., S.
SPOKANE 126 S. Post St.
TACOMA 1209 South "A" St.

WEST VIRGINIA

BECKLEY (Raleigh Hardware Co.)
BLUEFIELD (Superior Sterling Co.) 200 Bluefield Ave.
CHARLESTON 502 Broad St.
FAIRMONT (Fairmont Supply Co.) 10th St. and Beltline Siding
HUNTINGTON (Emmons-Hawkins Hardware Co.) 1028-1032 Third Ave.
WHEELING (Wheeling Machine Products Co.) 20th and Main Sts.

WISCONSIN

MADISON 641 Williamson St.
MILWAUKEE 225 W. Capitol Drive
OSHKOSH 37 Market St.

WYOMING

CASPER (Crane-O'Fallon Co.) 802 East "C" St.

CRANE PUMPS



K-250
Shallow Well Pump





Crane pumps are sturdily built in sizes and types to meet every service condition. For shallow wells, lakes or other sources where depth is of 22 feet or less the Crane Shallow Well Pump is recommended. For lifting water from depths as low as 500 feet, the Crane Deep Well Pumps should be used.

A complete Crane System includes pump, motor, pneumatic storage tank, automatic pressure gauge, relief valve and all necessary fittings—a complete packaged unit.

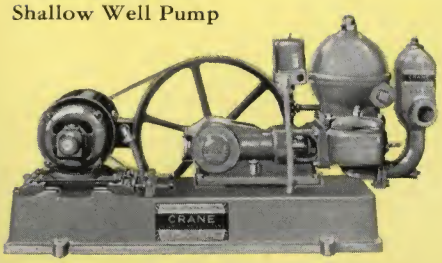
Crane Pumps are new in design and possess high efficiency in performance. All working parts are easily accessible and the capacitor motors are powerful, quiet and cannot cause radio interference. They have a built-in switch which protects against danger of overloads. Silent V-type flexible belt transmits full power from motor to pump.

Shallow Well pumps may be had in sizes to pump 250, 400, 500, 800 and 1,000 gallons per hour.

Deep Well Pumps may be had in a range of capacities from 170 to 1,800 gallons per hour.



S-80 and S-100
Shallow Well Pump





Deep Well
Pumping Head

AD-1271—PRINTED IN U. S. A.—5-38—65M

CRANE-EQUIP

FOR

SATISFACTION

PLUMBING

HEATING

WATER SYSTEMS

WATER CONDITIONING

AIR CONDITIONING

CRANE CO. • 836 S. MICHIGAN AVE. • CHICAGO

FITZGIBBONS

Your Guide to dependable, low-cost

HEATING

★

HOT WATER

★

AIR CONDITIONING



Second Edition

FITZGIBBONS

Your Guide to dependable, low-cost

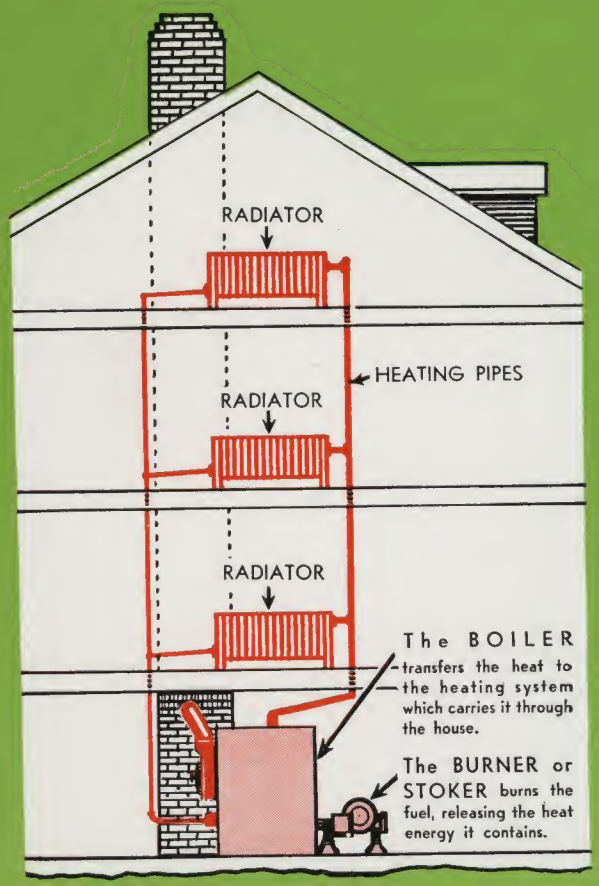
HEAT ★ HOT WATER ★ AIR CONDITIONING

★ Is the home you are building going to be the cozy, comfortable place you anticipate? The answer depends to a very large extent upon the mechanical equipment that goes into it—the equipment for *heating, hot water* and *air conditioning.*

Your home may be attractive, it may be well laid out and nicely finished and furnished. Even so, you will never be entirely happy in it if you cannot heat it properly in winter, if you cannot maintain uniformly comfortable, healthful conditions all through the year, or if you cannot get all the hot water you want for kitchen, laundry and bath, when you want it . . . and all at reasonable cost.

Heat, hot water and air conditioning are *so* important that, even though you depend on your Architect, Builder or Heating Contractor to plan these services, it is well for you to check up on the equipment being selected and satisfy yourself that dependable, economical results are being assured.

The information contained in the following pages of this bulletin will help to guide you in doing this.



Simplified diagram of a heating system. It shows the three main parts to every system and makes clear the leading part played by the BOILER in heating your home.

Check particularly these vital points

HEATING BOILER

Every heating system consists of three main parts:

(1) *The fuel burning mechanism*
Oil burner, gas burner, mechanical coal stoker, or just the plain grate if you are going to fire your coal by hand.

(2) *The heat transfer unit*
This is the boiler.

(3) *The pipes and radiators or ducts*
Ducts are used where you have air conditioning.

Now, the fuel burning mechanism, be it oil burner, gas burner, or coal stoker, *does not heat the house.* Its function is to burn the fuel and so release the stored up heat energy.

It is the boiler that picks up this heat and transfers it to the boiler water, from where it is carried by the piping to all parts of the house. And upon the speed and efficiency with which the boiler is capable of performing this function, depends the speed with which your house will be heated, and the amount of fuel you will have to burn to keep it properly heated. The design of the boiler also has an important bearing on the efficiency with which the fuel burning mechanism—oil or gas burner or coal stoker—performs its function of burning the fuel. For satisfactory results you must have a boiler designed and built specifically for the fuel you are going to burn.

For Further Information turn to page 16

COPYRIGHT 1937, FITZGIBBONS BOILER COMPANY, INC.

So you see, *the boiler* is the important element in any heating system, the principal factor in determining heating performance and heating costs.

By all means, check up on the heating boiler that is going into your home and when you do, check particularly for the following points:

IS IT A STEEL BOILER?

In the old days when hand firing of coal prevailed, residence boilers were made of cast iron. Then came the development of automatic heating with oil, gas and mechanical stokers.

At first, burners and stokers were installed in existing boilers. It soon became evident, however, that these boilers were not suited to automatic firing. Heating was slow and fuel consumption was high.

Attempts were made to redesign some of the old type boilers and dress them up for automatic firing, but this proved a costly and impractical expense.

The development of scientifically designed steel boilers provided the answer to the problem; steel provides maximum strength and endurance; it offers every latitude to scientific designing; it insures efficiency and economy in operation; it eliminates all possibility of cracks and breaks.

For proof of the superiority of steel boilers, one needs but to turn to the large commercial, industrial and institutional buildings. *In these buildings where heating service must be absolutely satisfactory and reliable, and where heating costs must be kept as low as possible, steel boilers are most generally used.*

Today, steel boilers for oil, gas, stoker or hand firing, are available for any and every size home. Thus, every home owner can now enjoy their advantages. And so, if you want to be sure of quick heating, uniform temperatures, low fuel bills and freedom from boiler worry and trouble for the life of your building, *see to it that a modern steel boiler goes into your home.*

IS IT EASY TO CLEAN?

In selecting a boiler this feature is usually not given the attention it deserves. With all combustion—coal, oil or gas—there is *some* deposit of soot on the working surfaces of the boiler. Now, this soot, since it does not allow heat to pass through readily, cuts down the boiler's efficiency. Periodic cleaning is, therefore, essential with every boiler.

In many boilers, flue passages are very hard to get at. These difficult-to-clean boilers are generally not cleaned, which means a constantly decreasing efficiency reflected in poorer heating and steadily mounting fuel bills.

Be sure you get a boiler that is easy to clean.



Plenty of hot water when you want it. Make sure you are going to have it in your home.

WILL THE BOILER SUPPLY YOU WITH DOMESTIC HOT WATER?

In former years, you had to have a lot of separate equipment for supplying domestic hot water. But now, you can get a boiler that will give you all the hot water you need, all year 'round, even without a storage tank. Think of what that means in saving on initial cost of equipment, in space saving and in hot water costs. *Certainly you want such a boiler.*

★

On the following pages you will find illustrations and descriptions of *steel boilers* for oil, gas, coal or mechanical stoker firing that satisfy all requirements, including the hot water and other special points covered in the foregoing paragraphs. These boilers work equally well in steam, vapor, vacuum or hot water heating systems.

AIR CONDITIONING . . .

A word here, about AIR CONDITIONING. Today, even small homes of moderate cost are being air conditioned. A few years hence, air conditioning will unquestionably be the rule in all new buildings and a home without this modern improvement for health and comfort, will be definitely less "sellable." Plan now to safeguard your investment. Read about the development described on pages 14 and 15 which combines *heating, hot water supply* and *air conditioning,* all in a *single compact unit.*

FITZGIBBONS

the FITZGIBBONS OIL-EIGHTY AUTOMATIC

for automatic heating with OIL

★ For satisfactory heating with oil you want first of all a *steel boiler.* Only steel has the combined strength and resiliency to withstand the repeated expansion and contraction of metal caused by the continual on-and-off operation of the burner, and only steel permits of a design that provides the conditions the burner needs, to burn oil efficiently. Oil Burner men themselves recognize this, as is indicated by available statistics, which show that 43 out of 73 oil burner manufacturers who distribute boiler-burner units, have selected *steel* boilers for use with their burners.

Next you want a boiler that is capable of absorbing and transferring heat as fast as the burner liberates it so that no heat will be wasted and so that your house will heat up quickly in response to burner operation. Only a *steel* boiler, designed and built expressly for oil burning, can do this, and give you quick heat and uniform temperatures at low fuel cost.

Such a boiler is the Fitzgibbons OIL-EIGHTY Automatic, the boiler that is illustrated and described on the next three pages. This handsome modern steel boiler will not only assure you of quick, dependable, low-cost heat for as long as your house lasts, but in addition will *provide you with an unfailing supply of domestic hot water, winter and summer.*



For Further Information Turn to Page 16

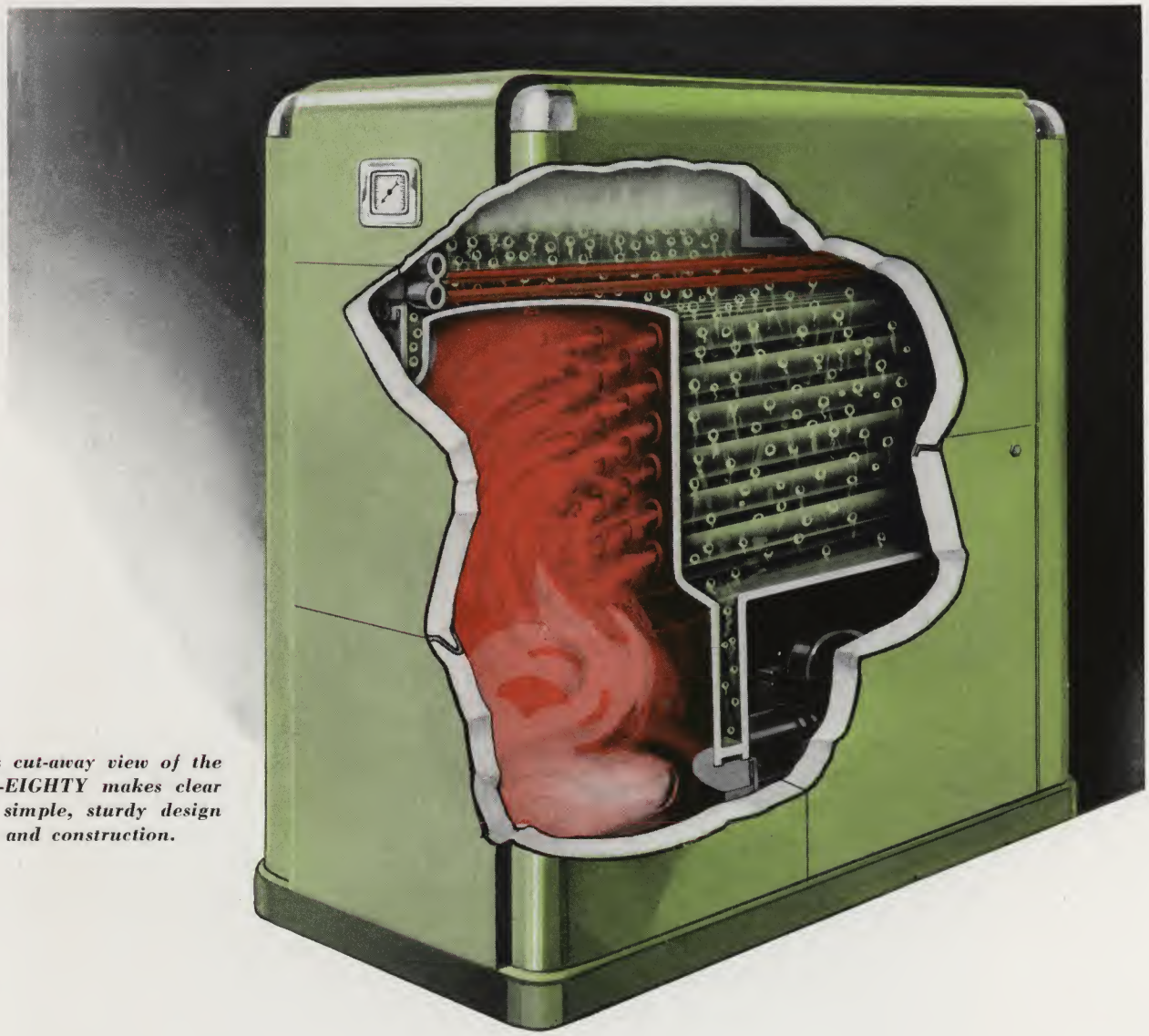


ALL COPPER-STEEL

Built entirely of steel boiler plate containing a fixed percentage of copper fused with the metal, which serves to effectively resist corrosion. The tubes as well are made of this same rust-defying, copper-bearing steel, assuring an equally long life.

HIGHLY EFFICIENT

The OIL-EIGHTY is in reality a *small power plant boiler,* similar to the big Fitzgibbons steel boilers that are used to heat the large commercial, institutional and industrial buildings, where heating *must be reliable and economical.* It embodies the features which give these big



This cut-away view of the OIL-EIGHTY makes clear the simple, sturdy design and construction.

boilers the dependability and economy demanded of them—the developments of an unbroken 50 years of successful steel boiler building. With this boiler in your basement you can be sure of the same fine heating performance and economy of fuel that have turned thousands of OIL-EIGHTY owners into enthusiastic boosters.

OPERATES WITH ANY OIL BURNER

Any good oil burner of either the rotary or gun type, can be used with the OIL-EIGHTY. This leaves you free to select the burner that offers you the most reliable service in the particular section where your home is located—an important consideration. Your local oil burner dealer will be glad to see an OIL-EIGHTY specified, because burner men generally, know that this boiler provides the conditions essential to best burner performance.

HOT WATER SUPPLY

On pages 12 and 13 of this bulletin you will find a description of the Fitzgibbons submerged domestic hot water supply copper coils available in OIL-EIGHTY boilers.

COMPACT AND ATTRACTIVE

The illustration gives but a fair idea of the beauty of the OIL-EIGHTY. No picture can

do more. But beauty is not all. Within that tastefully colored, chromium-trimmed steel jacket are housed *all of the essential equipment for automatic oil heat and year 'round domestic hot water service* including burner controls. Though out of sight and safely protected, burner and controls are readily accessible through the large, easily removable panels. The space-saving features of the OIL-EIGHTY will enable you to do a lot more with that extra basement room.

THOROUGHLY INSULATED

With the OIL-EIGHTY your basement room can be just as comfortable as any other room in the house because the entire jacket is heavily lined with insulating material which keeps the heat *inside* the boiler. This advantage is particularly appreciated when the boiler is operated in the summer for hot water. Burner and combustion sounds are also minimized by the enclosure of the burner.

EASY TO CLEAN

Cleaning the OIL-EIGHTY is a very simple operation, infrequently required because of the boiler's high combustion efficiency. A few strokes of the wire brush (supplied with boiler) through the straight, unobstructed tubes, accessible through the large front and rear doors, remove all deposit. In a few moments boiler surfaces are clean as new. Thus, the boiler's initial high efficiency is readily maintained.

TWELVE SIZES

This wide range of sizes offers you a boiler that is neither too large nor too small, but just right for your heating requirements—and that means proper heating and maximum economy.

The OIL-EIGHTY works equally well in steam, vapor, vacuum or hot water heating systems.

ADAPTED FOR AIR CONDITIONING

If you are not planning on air conditioning now you may want to add it later. The OIL-EIGHTY will permit you to do this, for it is perfectly adapted for service with air conditioning equipment.

★

If you are going to burn oil, the OIL-EIGHTY is the soundest investment you can make from every point of view.

for automatic heating with

GAS

★ Automatic heating with gas is very similar to automatic heating with oil in so far as basic combustion and heat transfer principles are concerned. Hence, the design and construction of the boiler best suited to gas firing closely parallels the boiler for oil firing.

FITZGIBBONS boilers for gas firing are very similar to the OIL-EIGHTY Automatic oil burning boilers described and illustrated in the preceding pages. They are built entirely of strong, durable, dust-defying copper-steel, and are characterized by the same quick heating and highly efficient, fuel-saving performance for which the OIL-EIGHTY is noted. Likewise, they are handsomely jacketed, compact, and will operate equally well with any gas burner. Like all Fitzgibbons boilers they are exceptionally easy to clean. They are also available with the submerged domestic hot water coils described on pages 12 and 13. They are perfectly adapted for service with air conditioning equipment. Twelve different sizes accurately meet the heating needs of any home.

Fitzgibbons gas burning boilers DO NOT require A.G.A. approval since they are not sold by us with an integral gas burner and its controls. (We do not manufacture gas burners, oil burners or stokers). Fitzgibbons Boilers with conversion gas burners are giving splendid satisfaction in homes from coast to coast.

FITZGIBBONS 80 COAL-EIGHTY AUTOMATIC

for automatic heating with STOKERS

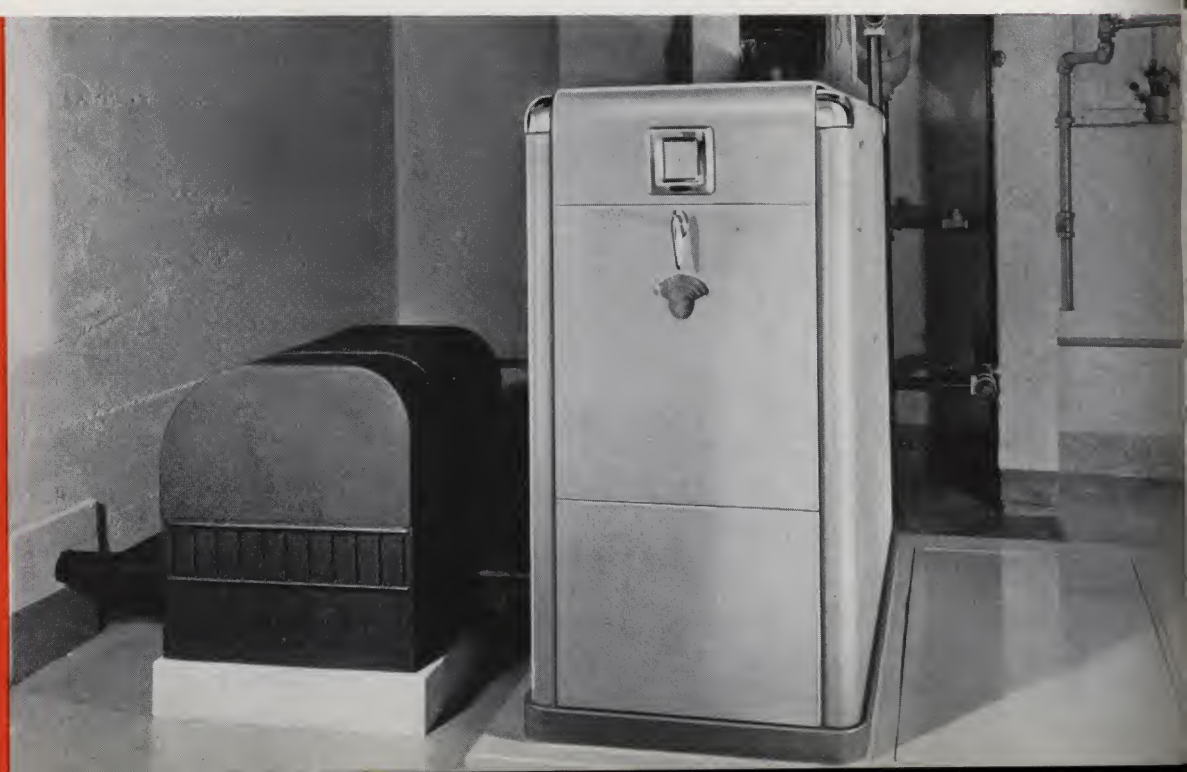
★ Developments in mechanical coal stokers have made automatic heating with coal thoroughly practical and satisfactory today. But, as is the case with oil or gas burners, results obtainable with a mechanical stoker, depend to a very large degree on the heating boiler used with the stoker. If the cleanliness, excellent heating performance and economy now feasible with mechanical stokers, are to be realized, a boiler suited to this particular type of firing is needed. The boiler must provide the conditions which the stoker needs for efficient combustion, and for quick, efficient transfer of the heat released by the burning of the coal. Such a boiler is the Fitzgibbons COAL-EIGHTY AUTOMATIC, illustrated and described on this and the next two pages.

The design and construction of this boiler are based on the findings of an exhaustive survey and study of mechanical stoker requirements. As a result, *the COAL-EIGHTY AUTOMATIC will team up with anthracite stokers,* and give you an automatic heating unit that is as attractive, as clean and as efficient as an oil or gas heating installation. Its principal features and advantages are given on the next two pages.

Note below the modern basement installation of a Fitzgibbons Coal-Eighty Automatic with a "Bin-feed" type stoker. Hot water is supplied from the tanksaver, no storage tank required.

ANTHRACITE INDUSTRIES INCORPORATED approved

The FITZGIBBONS COAL-EIGHTY AUTOMATIC has been awarded the CERTIFICATE OF APPROVAL of the **ANTHRACITE INDUSTRIES, Inc.** after exhaustive tests in its laboratory at Primos, Pennsylvania.

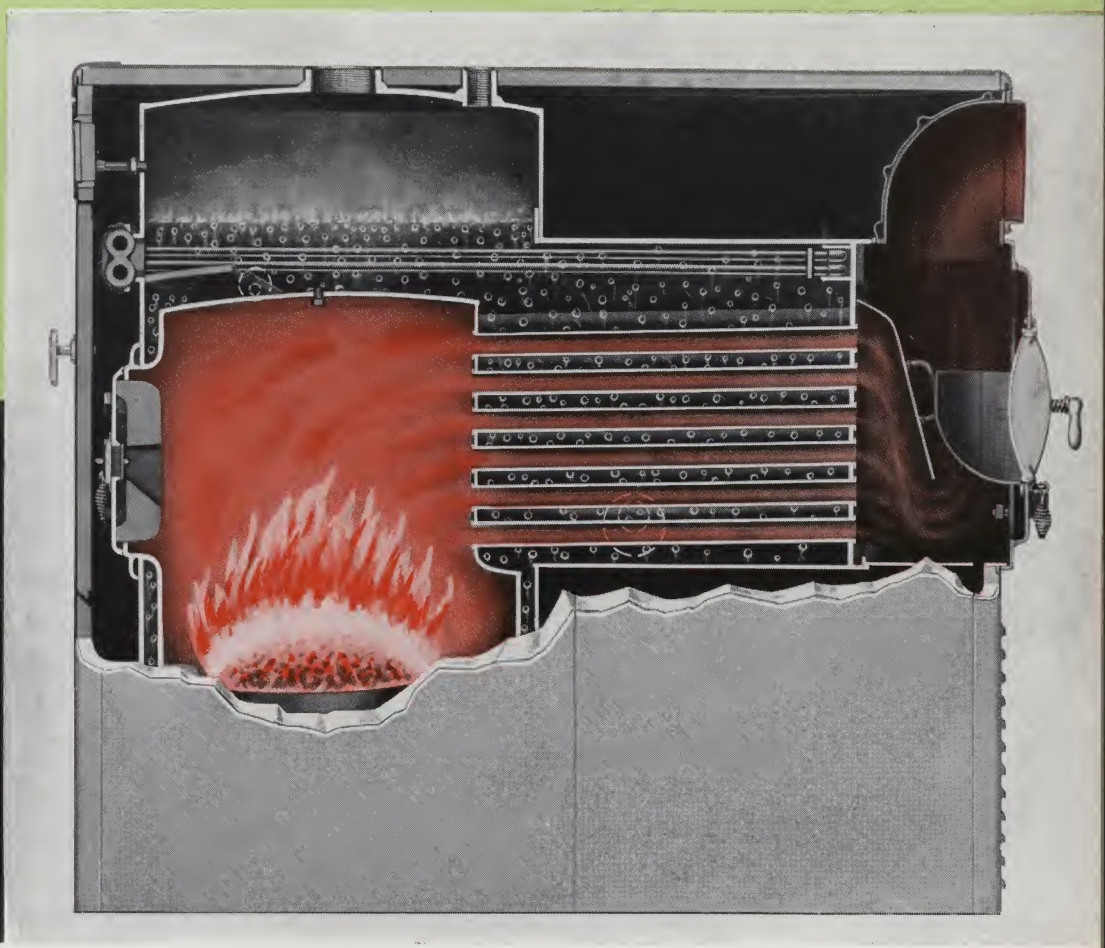


The large number of tubes in the COAL-EIGHTY AUTOMATIC is one of the reasons for the quick, efficient heat transfer for which this boiler is noted.





Cut-away view of the COAL-EIGHTY AUTOMATIC, stoker-fired and equipped for domestic hot water supply with the Fitzgibbons TANKSAVER.



ALL COPPER-STEEL

Built entirely of copper-steel boiler plate, combining strength and resiliency with life-time crack-proof rust-resisting durability.

HIGH COMBUSTION CHAMBER

Provides ample room for complete combustion of the gases before they strike the crown sheet, even with long-flame coals. This means smokeless operation and avoids the usual necessity of raising the boiler.

HIGH EFFICIENCY

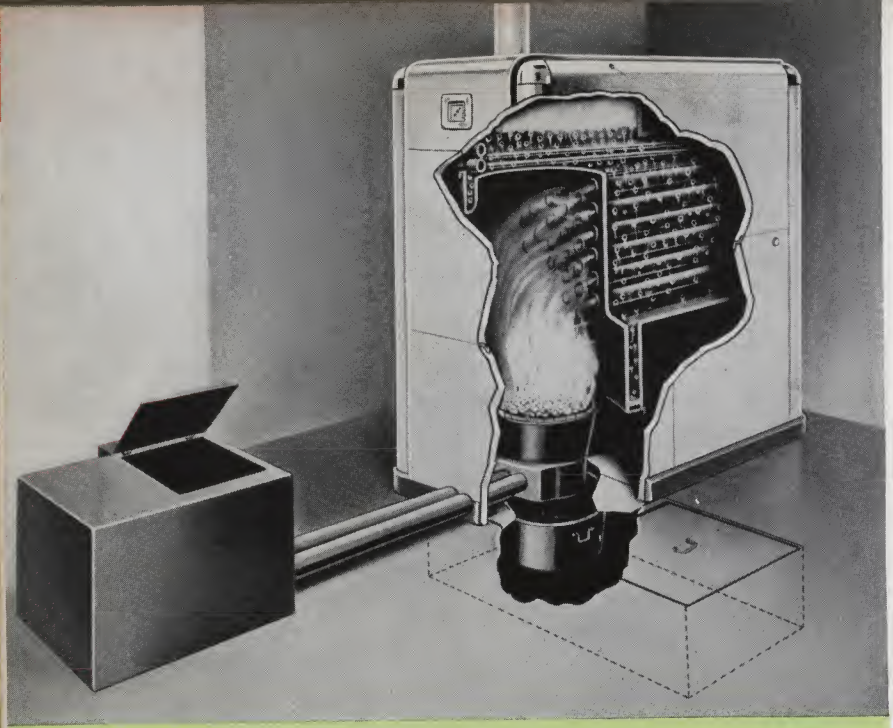
Complete combustion and rapid, efficient heat transfer are assured by the general design, and by certain exclusive features which maintain a balanced draft, equalize the flow of gases through the tubes, and provide an exceptionally positive and powerful water circulation. Quick heat, uniform temperatures, and low fuel bills are the result.

COMPLETELY ENCLOSED

The thickly insulated steel jacket, extending right down to the floor, prevents the escape of fly ash, and saves heat by keeping it *inside* the boiler, an important advantage when the stoker is operated for summer hot water. Machine-finished and gasket-sealed doors also aid in preventing fly ash and gases from leaking out.

HOT WATER SUPPLY

On pages 12 and 13 of this bulletin is a description of the Fitzgibbons submerged domestic hot water supply coils available in COAL-EIGHTY AUTOMATIC boilers.

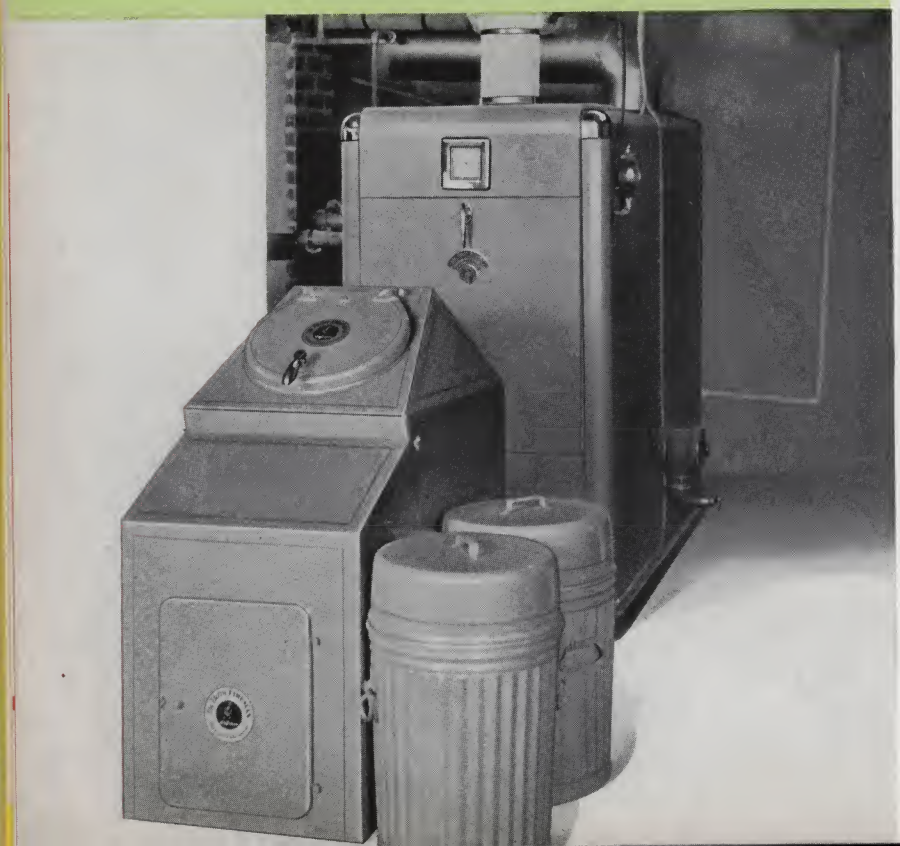


Here is a typical layout of the modern "bin-fed" type of residence stoker installation for which the COAL-EIGHTY AUTOMATIC is ideally suited. Below is shown an actual installation of this type.

In the picture below, note the dust-proof construction of the COAL-EIGHTY AUTOMATIC, its thickly insulated, steel jacket covering all doors and extending clear down to the floor.

Note also the absence of a domestic hot water storage tank, the need for which is eliminated by the Fitzgibbons TANKSAVER (See page 12) available with the boiler.

The clean, attractive combination of a "bin-fed" type of stoker installation and the COAL-EIGHTY AUTOMATIC makes the dream of an extra basement room a reality for any home in which coal is to be burned automatically.



ATTRACTIVE APPEARANCE

The tastefully colored, chromium-trimmed steel jacket adds the touch of beauty so desirable in modern basement plans. Standard locations are provided for aquastats and all other automatic controls.

EASY TO CLEAN

Because all combustion surfaces, including the straight, unobstructed fire tubes are readily accessible through the large front and rear doors, the boiler can be thoroughly cleaned in a few moments, thus always maintaining the initial high efficiency. Stokers can be installed in the rear or on either side, leaving the front clear for cleaning.

TWELVE SIZES

This wide range makes it possible to meet the exact heating needs of your particular size home. This means proper heating with maximum economy. If you are going to have automatic coal stoker heat, *it will pay you to see that a COAL-EIGHTY AUTOMATIC Boiler is specified.*

ADAPTED FOR AIR CONDITIONING

The COAL-EIGHTY AUTOMATIC works equally well in steam, vapor, vacuum or hot water heating systems and is adaptable for service with air conditioning equipment.

FITZGIBBONS

for coal, oil, gas or stoker firing

the FITZGIBBONS R-Z-U JUNIOR

FOR THE LARGER RESIDENCES

★ Built in size to accommodate the larger residence, this member of the renowned line of Fitzgibbons Steel Boilers, is admirably suited for clean, efficient, economical heating. For automatic heating, it will team up perfectly with any mechanical stoker, oil burner, or gas burner of the proper size.

Among its outstanding features is an auxiliary grate, furnished as optional equipment on mechanically fired boilers, which serves as a means for hand firing the boiler should the stoker or burner be temporarily shut down for any reason, and also for refuse disposal. The R-Z-U JUNIOR is characterized by the quick heating speed and highly efficient, fuel-saving performance common to all Fitzgibbons boilers, and is equally easy to clean.

An attractive, heavily insulated, full-length steel jacket is available at option, making the boiler suitable for extra basement rooms, providing maximum cleanliness and preventing heat loss. Also as optional equipment are the domestic hot water supply coils described on the next two pages. Boiler sizes range from 750 to 3,900 square foot steam rating, and all are adaptable to air conditioning.

The R-Z-U JUNIOR works equally well in steam, vapor, vacuum or hot water heating systems.

For further information please turn to page 16



THE FITZGIBBONS TANKSAVER

This is the Fitzgibbons TANKSAVER described below, an exclusive Fitzgibbons development, available only in Fitzgibbons Steel Heating Boilers.



THE FITZGIBBONS *Submerged* HOT WATER SUPPLY COILS

★ This patented unit, shown above, is available as optional equipment with all Fitzgibbons heating boilers for automatic firing with oil, gas or mechanical coal stoker. It is mounted entirely inside the boiler, with provision for easy external connection to the water system.

Located just below the water line where the boiler water is hottest, the Fitzgibbons TANKSAVER provides, at low cost, a supply of clean hot water for laundry, kitchen and bath, *without a storage tank.*

The Fitzgibbons TANKSAVER is made in a range of sizes which deliver from 150 to 760 gallons rate of flow per hour, with the boiler water at 212° F. and a city water pressure of 30 pounds. The capacities which are available with any particular boiler depend on the size of the boiler.

Fitzgibbons engineers will be glad to cooperate in selecting the right size of TANKSAVER to supply the volume of hot water that meets your requirements. *The TANKSAVER is available only with Fitzgibbons boilers.*

You can readily appreciate how much more you can do with your basement where you require *only the one unit* to take care of both heating and hot water —an attractive Fitzgibbons life-time steel boiler with its self-contained submerged TANKSAVER.

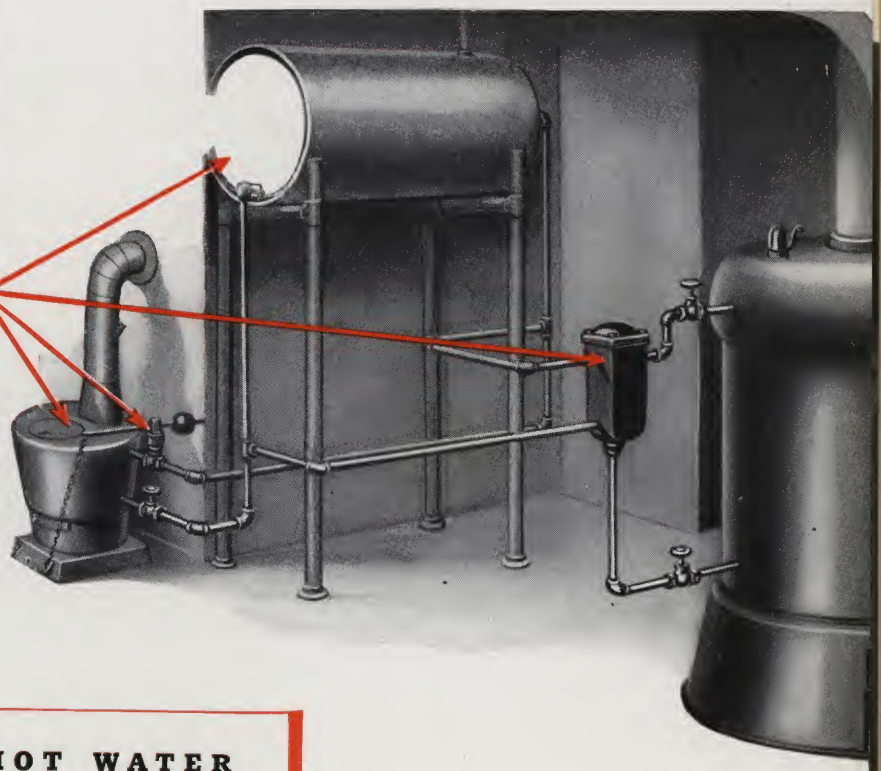
With Fitzgibbons boilers for hand firing, and where automatic control of domestic hot water supply is not possible, the Fitzgibbons Tankheater is available at option.

With any Fitzgibbons Boiler for automatic heating

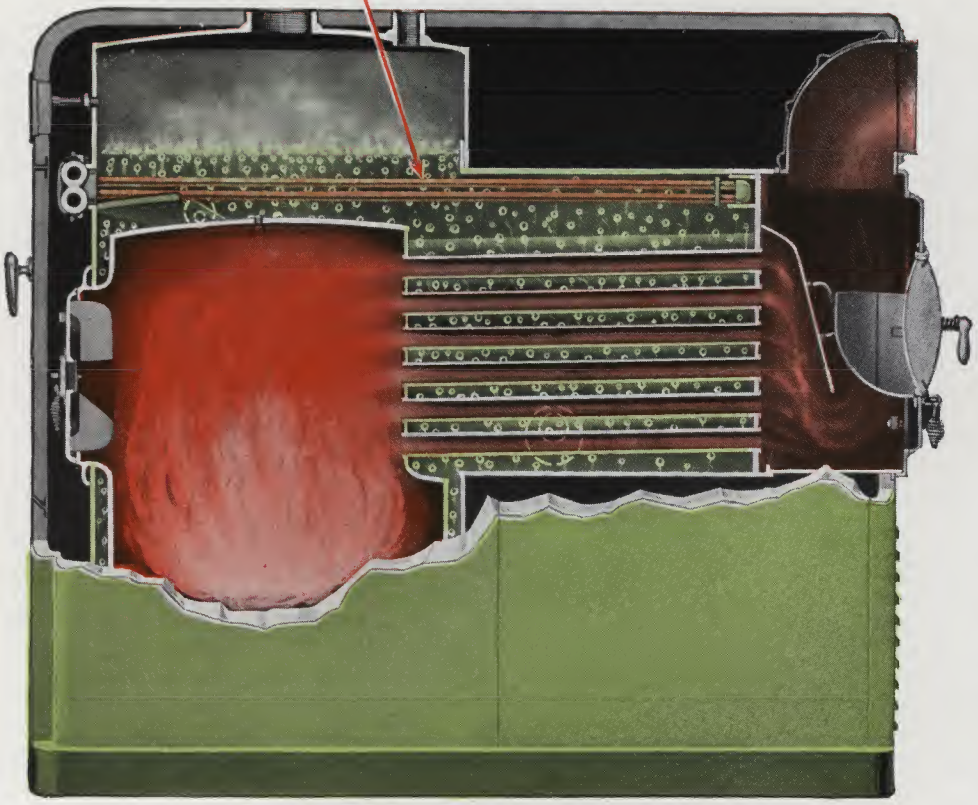
THESE

are all replaced with

THIS



SUBMERGED COPPER HOT WATER COIL LOCATED INSIDE THE BOILER THE FITZGIBBONS TANKSAVER



This picture shows the TANKSAVER mounted in place in a Fitzgibbons OIL-EIGHTY equipped with an oil burner. It is located in the same position, just below the water line, in boilers for gas or stoker firing. When ordered, it comes assembled in the boiler. The Fitzgibbons TANKSAVER is made of copper and will not rust. Therefore the water that comes out of it is clean and pure.

Owners of Fitzgibbons boilers, everywhere, agree that the abundant supply of clean hot water they get from the *invisible* TANKSAVER, is a source of great satisfaction and comfort.

the Fitzgibbons
BOILER★AIR CONDITIONER

★ Here is a unit that has completely changed the air conditioning situation with respect to homes. Now, even if you are building a small or medium size home, you can enjoy the benefits and advantages of modern air conditioning at a cost that you will find surprisingly reasonable.

The Fitzgibbons BOILER-AIR CONDITIONER has made this possible, by combining in a *single, compact unit,* which takes up no more room than an ordinary heating boiler alone, the three vital home services of (1) Air Conditioning; (2) Steel Boiler Heat; (3) Domestic Hot Water Supply.

Here are the details of each service as supplied by this single unit.

★

THE FITZGIBBONSAIRE

in conjunction with Fitzgibbons Steel Boilers for automatic firing makes it possible for the larger residences to enjoy all the benefits of healthful economical "Split-System" boiler-air conditioning.

The combination of FITZGIBBONSAIRE and boiler provides the same three services that are supplied by the Fitzgibbons BOILER-AIR CONDITIONER, namely: (1) Air conditioning; (2) Steel Boiler-Radiator Heat; (3) Year-'Round Domestic Hot Water.

For further information please turn to the next page

A TRIM COMPACT GOOD LOOKING UNIT EQUIPPED WITH THE TANKSAVER



. . AVAILABLE FOR ANY SIZE HOME!

combining AIR CONDITIONING ★ HOT WATER AND HEAT!

BASEMENT UTILITY AND BEAUTY



As the illustration shows, the Fitzgibbons BOILER-AIR CONDITIONER is not only a remarkable space saver, but a pleasingly attractive unit as well—one that presents entirely new and broader possibilities for the design and arrangement of the basement. It makes practicable the extra basement room, even in the small house.

It will pay you to give this unit your careful consideration. Not only will it make your home a comfortable and more healthful place in which to live, but by thoroughly cleaning the air, it will also reduce cleaning labor and laundry bills. It will also add considerably to the value of your house.

SPLIT SYSTEM AIR CONDITIONING



This BOILER-AIR CONDITIONING *cleans* the air, *tempers* it, *humidifies* it, and forces the circulation of this thoroughly conditioned, healthful and comfort-giving air to every room you desire. It is ideal for the popular and economical "split system" type of installation—the combination of air conditioning in selected rooms, and boiler-radiator heat elsewhere. It will, if you desire, provide air conditioning in every room.

It gives you quiet operation. It is entirely sound-proofed. Moving parts are mounted on special bearings which absorb all vibration. Air ducts do not communicate directly with the combustion chamber, hence they cannot act as "speaking tubes" for even faint sounds of operation.

STEEL BOILER HEAT



The Fitzgibbons Boiler-Air Conditioner works *with any good oil burner.* This means that the burner you may find it advantageous to select, will be at home in this unit—where it may be concealed behind easily removable panels in the jacket, safe from dust, careless feet, or prying fingers. The BOILER-AIR CONDITIONER works equally well *with any domestic coal stoker,* or *with any gas burner.* It is built in types specially designed for these fuels, thus for the first time applying to air conditioning, the advances recently made in these methods of firing. Like the separate Fitzgibbons boilers it is built of strong, durable, rust-resisting copper-steel, good for a lifetime of trouble-free service.

HOT WATER SUPPLY



Every BOILER-AIR CONDITIONER is equipped with the Fitzgibbons TANKSAVER, described on the preceding two pages, which provides abundant, clean hot water year 'round at low cost—eliminating the need for a storage tank or other external hot water apparatus.

HOW TO GET *complete* INFORMATION

Your Architect, Builder or Heating Contractor undoubtedly knows about the Fitzgibbons Steel Boilers and Boiler-Air Conditioners illustrated and described on the preceding pages, and may have in file our catalogs which give complete details including capacities and dimensions. If not, full details will be gladly furnished by the nearest of the Fitzgibbons branches and representatives listed below. If none of these offices are near your home, write to our General Office in New York City and we will see to it that full information is promptly supplied.

FREE ADVISORY COOPERATION

Our representatives are all thoroughly trained and experienced in all matters pertaining to heating, domestic hot water and air conditioning. Without obligation, they will gladly consult with your Architect, Builder or Heating Contractor, and render every assistance in planning your heating, hot water and air conditioning, and in selecting the proper units to meet and satisfy the requirements of your home.

We will be glad, of course, to answer any question about heating, hot water or air conditioning that you may wish to address to us direct. There is no obligation, so please do not hesitate to write.

BUY THROUGH YOUR LOCAL DEALER

Fitzgibbons Steel Boilers and Boiler-Air Conditioners are sold only through recognized Dealers and Heating Contractors, many of whom have them on display. It is to your advantage to buy through your local dealer, or contractor, who will then be available to service your equipment. If you wish, we will be pleased to give you upon request, the name and address of a reliable dealer located near you.

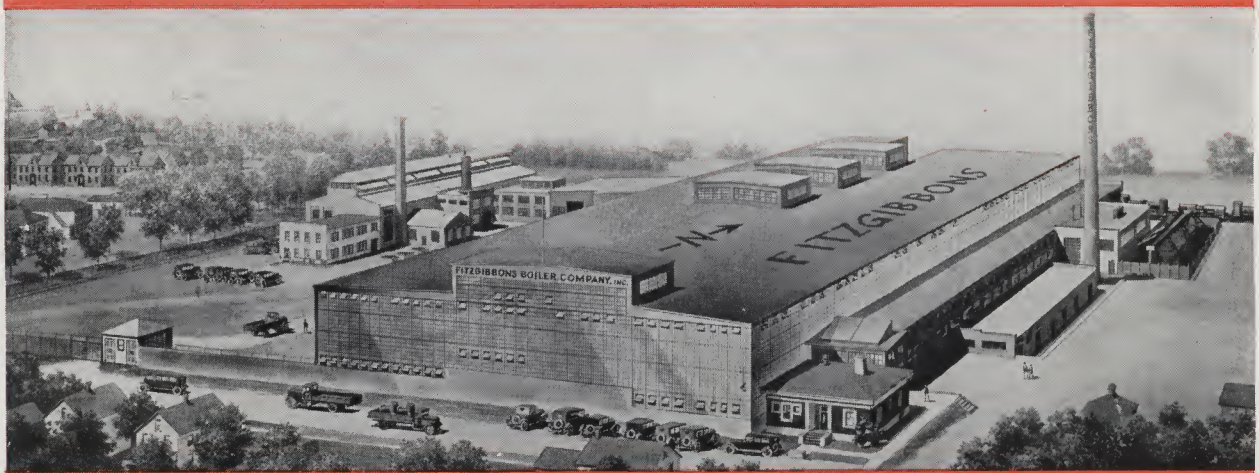
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The FITZGIBBONS factory, Oswego, N. Y., where the experience, the refinements and the perfection of 50 years of steel boiler manufacturing go into FITZGIBBONS BOILERS and BOILER-AIR CONDITIONERS.

Glass

IN YOUR NEW HOME



Examples and suggestions from the work of Architects, Interior Designers and Home Furnishing authorities which will make your home brighter and more livable.

LIBBEY • OWENS • FORD GLASS COMPANY

Because so much can be done with glass, both in construction and decoration, we believe that you will find these pages a valuable guide in planning those distinctive touches that lift a home above the average and make it an attractive, inspiring place in which to live and entertain one's friends.

". . . Out of windows we walk onto lawns in summer and meet men and women, and in winter windows are drums for the splendid music of storms that make us feel so masterly 'round our fires. But for windows, we should have to go out-of-doors to see the daylight. After the sun, which they serve, I know of nothing so beneficent as windows. Fie upon the ungrateful man who has no window-god in his house, and thinks himself too great a philosopher to bow down to windows. May he live in a place without windows for awhile to teach him the value of windows. As for me, I will keep the high worship of windows till I come to a windowless grave."

—Hilaire Belloc





Everywhere





YOU SEE A MORE GENEROUS USE OF GLASS IN THE HOME . . .

What is essentially a new type home has come into existence in recent years. Its dominant characteristic is more and larger windows, but the increased use of glass by no means stops with the windows. Inside, you find a very liberal portion of the wall space specially planned for mirrors. Sun porches and solaria are almost always integral features of design. And the interior designer carries on, when the architect's work is done, with mirror-topped and glass-topped tables, with many *incidental* mirrors on the wall, with mirrored screens, glass and mirrored accessories and a score of other details which owe their charm and distinction to glass. Almost everywhere, glass is receiving the recognition to which its beauty and practical utility entitle it, not alone as a building material but as a decorative medium ideally suited to express the many moods and phases of a new era in gracious living. In planning your new home, you are sure to find numerous ways in which a more generous use of glass will add to its attractiveness. The following pages may suggest a few that would not ordinarily come to mind. Today, new types of glass, new colors, new techniques in glass treatment increase its decora-



tive and utilitarian possibilities to a far greater extent than heretofore. Your interior decorator or L. O. F. Glass distributor will be glad to cooperate. See the back cover of this brochure for list of branch offices.

Glass IS THE KEYNOTE





OF *decoration and design*





Ask any woman to name the things she could do without in her home, and you will not find mirrors on the list. Not only are mirrors indispensable from a practical standpoint, they now have become an essential element in interior design as well. There is not a room in the home but what can be made to appear larger, brighter and more inviting by the use of well placed mirrors.

In the new home of today darkness and shadows are banished forever. Rooms teem with sunlight from many windows—windows that are double-glazed for more efficient air conditioning — Picture Windows that bring the living panorama of lawn or lake inside your home — Corner Windows, sparkling areas of glass that meet at right angles. These and other uses of glass make for rooms that radiate good taste and good cheer.

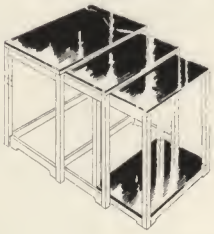
LIVING ROOMS *that*





Mirrors that completely frame a fireplace, in addition to the over-mantel type, are noted in many distinctive homes.

A nest of tables is always an asset from the purely practical viewpoint. When they have bright, gleaming glass or mirror tops, they rise above mere utility.





Glass tops on casual tables are easy to keep clean and provide efficient protection for the finish.



Mirror panels for light switches offer sparkling little spots of brilliance.

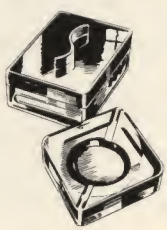
Design and decoration are vitally important because they delineate the character of the person responsible for them. They express either taste and discrimination or disclose the lack of these qualities. The possibilities of expression in design and decoration are greatly enhanced by the use of glass. No other material offers utilitarian and aesthetic values to the same degree. It has become the very keynote of decoration and design. In the living room, for instance, where contact between the family and the outside world is a major consideration, plenty of mirrors and liberal window areas create the stimu-

are Light... Lively and Livable

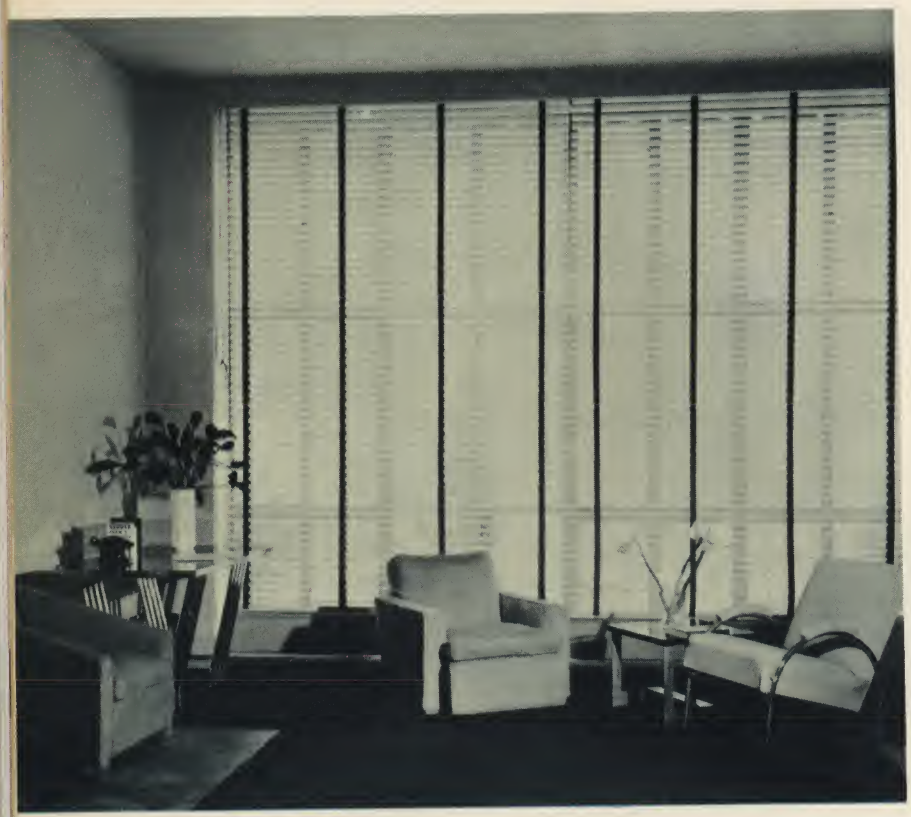


Mirrored accessories are very much in vogue. Cigarette boxes, ash trays, picture frames, wastebaskets and the like all lend themselves splendidly to this effective treatment.





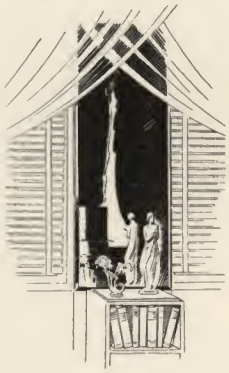
lating, lively air that the purpose of the room requires. There is no place in it for gloomy corners, dark walls and shadowed ceilings. Those relics of yesterday have flown in a flood of sunlight. In their place, has come a cheerful room. Windows welcome one's entry, warm one's stay, leave pleasant memories



that draw one back again. Picture Windows, those generously proportioned expanses of polished plate glass that frame one's favorite view and make it seem a marching mural on the wall. Corner Windows, those brilliantly glazed surfaces, meeting at right angles, that brighten interior corners. Glass in the walls, as windows, sets the theme. Glass on the walls, as mirrors, makes the room brighter and seem much more spacious. The skillful hand in decorating can do just as many tricks with mirrors as a stage magician, and get just as arresting results. For instance, the sunlight streaming through a window is thrown about the room by a wisely placed mirror. Mirrors repeat designs and create a room pattern where none has existed before.



There are few things prettier than small, colorful house plants placed on plate glass shelves in a window.



Occasional mirrors, framed or Venetian, are practical aids to the beauty of both the home and its owner.



Fire Screens of Tuf-Flex Tempered Plate glass, bound in an attractive metal frame, are attractive and practical. (See page 26)



Mirror panels between two windows create the illusion of one double size glazed surface.

..and the sparkle of Silver and Glass in the DINING ROOM..



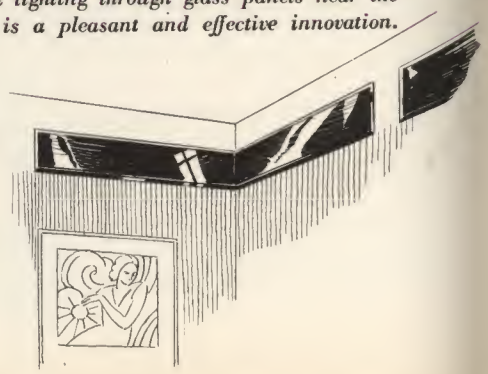
Everyone is bound to agree that the dining room itself is instrumental in tempting both the appetite and the company gathered at the board. For that reason, mirror-topped tables are enjoying a decided and well-merited vogue. There is something about an upside down reflection, that is delightfully different. This is especially true in the dining room. Everything in this room should be conducive to dining comfortably and with



Mirrored accessories about the dining table are just as important and effective as they are in any other room in the house.

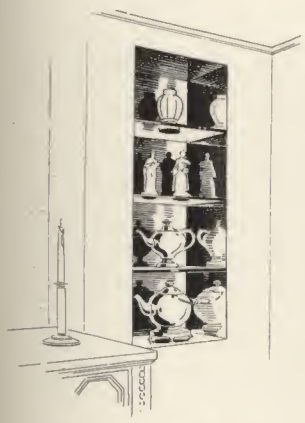
relish. There should be plenty of light from large windows for the daytime meals; soft, but effective illumination after dark. The lighting fixtures are important. Much can be done with mirrors in the fixtures themselves as well as on the walls and as accessories. A mirror may be hung so that it reflects a bit of the outdoor landscape. It may be used to reflect a needed bit of color or to catch the daylight and thus brighten

Indirect lighting through glass panels near the ceiling is a pleasant and effective innovation.





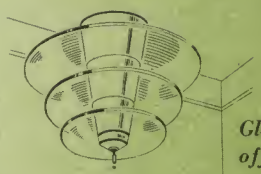
If your room is not built to accommodate a niche, hanging corner shelves of mirrored glass create a similar effect.



Glass shelves in mirrored niches set off and add lustre to anything placed upon them.



What a cheery place in which to dine! It cannot help but elevate the spirit to a plane in keeping with the light and airy atmosphere. It is easy to conceive one's pleasant reaction to such surroundings.



Glass in lighting fixtures offers innumerable interesting possibilities that challenge one's ingenuity.

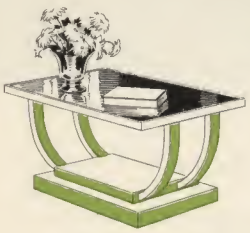


A glass pushplate on the door to the kitchen is very practical and also serves a decorative purpose.

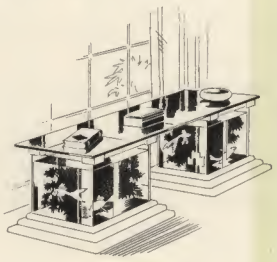
some part of the room that would otherwise be lifeless. At night, mirrors produce a mellow re-duplication of artificial lights. It may be well to consider indirect lighting through a glass lighting panel in the ceiling. Small niches lined with mirrors of clear or colored glass with shelves to match, for instance, will set off your most prized possessions to their best advantage. Do not be afraid of using too much glass in your dining room.

SUNPORCH





There are endless possibilities in casual tables that adopt glass as the basis of design.

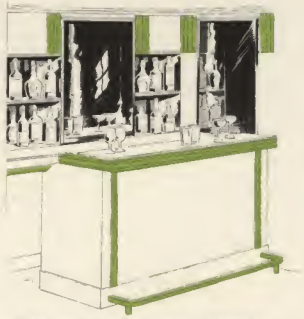


An aquarium is delightfully effective and a splendid hobby for one who enjoys those funny little fish.

A well planned sun porch adds another room at comparatively low cost and, therefore, is desirable in every modern home. Here, and in the recreation room, glass plays a major and perfectly obvious role as far as large windows and mirrors are concerned. And, of course, because of the large glass areas in sun porches, the selection of quality glass is of great importance. The relatively

and GAMES ROOM





If you have one in your games room, a bar is not really a bar unless it has the familiar panel mirror behind it. Many modern fixtures are faced with clear or mirrored glass.

minor uses of decorative glass in these important rooms, however, merits considerable attention. Glass topped end tables, stands and coffee tables are desirable not only because of their decorative value but because they do not "ring" and are so easily cleaned. Glass ornaments and accessories are exceedingly effective. Here you will find a true opportunity to let glass tempt your ingenuity.



Glass covered card tables are new and attractive. Their tops may be of Tuf-Flex Tempered plate glass when greater strength is desired. *See page 26 for further information about Tuf-Flex.*

BEAUTY COMFORT IN THE



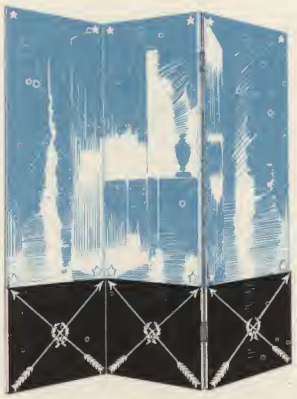




Extensive glass areas are definitely the trend and glass well merits the added emphasis now placed upon it as a basic material of construction. The reflective quality of a mirrored surface, is a most effective tool in the hands of a competent decorator. Everyone knows that mirrors increase the apparent spaciousness of a room and brighten dark corners, that mirrors bolster a drooping room by the reflection of lights and by throwing back important colors. These are decorative values no other material possesses. And the range of mirror uses today is almost infinite compared with the limited forms of other days. The use of colored plate glass for mirrors gives a pleasing softness of reflection. Several attractive colors are available to blend or contrast with other objects in the room. The uses of glass in the bedroom

MODERN *Bedroom*

are many and varied. They range from dominant beauty of a picture window to the cheerful little note introduced by the most incidental accessory in which glass or mirrored glass is used. Remember that this is your room, more than any other room in the house. You share the rest of your home with family and friends and seek in them an effect that will please others as well as yourself. In the bedroom,



● *A mirror screen is one of the most attractive major accessories that can be employed.*





An ingenious dressing room arrangement in which a wall panel swings open to expose a full length mirror. On the inside of the panel are drawers and glass enclosed shelves.



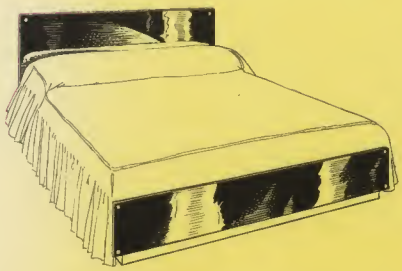
Glass drawer fronts on a closet chest are not only decorative but a practical convenience as well.



A clever arrangement of doors that open into a triple mirror is an inexpensive luxury that will be appreciated by every member of the family.

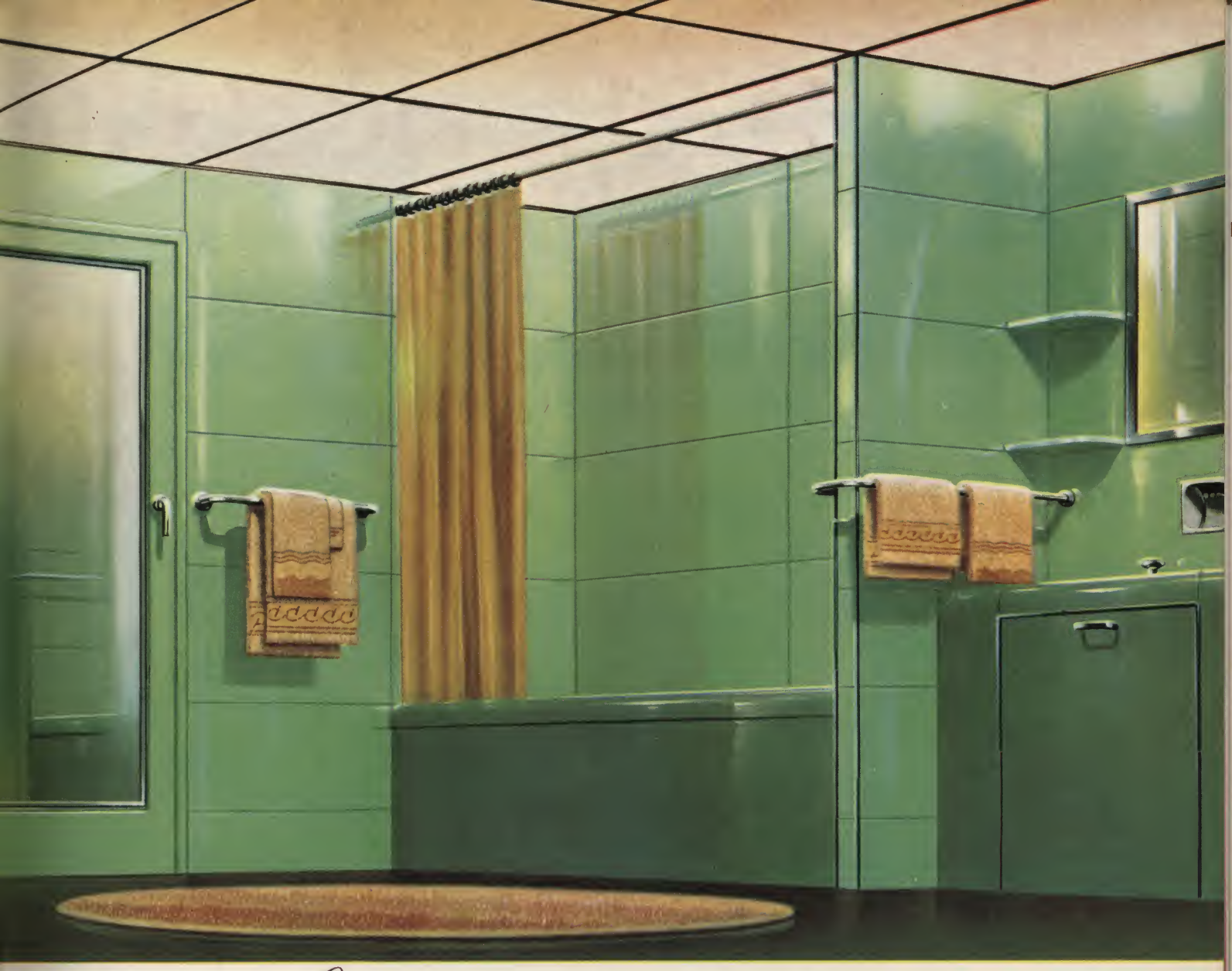


The attractiveness of a mirrored curtain valance well repays one for thinking of this distinctive treatment.



Mirror headboards and footboards for beds, either decorated or plain, are an unusually effective touch that lends a very superior air to the room.

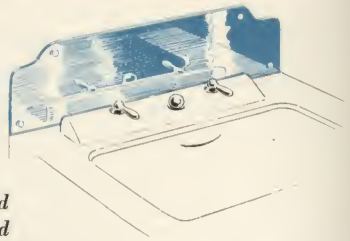
there is no necessity to consult or consider any taste but your own. Of course, by its very nature, this room calls for a treatment conducive to sleep and rest, to the maintenance of a quiet, peaceful atmosphere, to the more private and intimate life of its occupant. The use of glass should be restrained but none the less generous, for there are few things more appealing to the senses than the broad vistas pictured through generously proportioned windows or the framed reflections of tastefully chosen furniture and fixtures. The qualities that may be expressed are of the most varied nature. They include not only the personality of the person who lives in it, but the nature of the materials available, the spirit of the times, the atmosphere of thought and tradition allied with the owner and the purpose of the particular room in question. No medium of expression is quite as suitable as glass in meeting these requirements. The intelligent use of glass surfaces, both plain and mirrored, challenges and awakens the alert mentality and at the same time sets it unconsciously at rest, creating a definite sensation of satisfaction and good taste.



Vitrolux AND *Vitrolite* COMPLETE THE BATHROOM

There is something about glass that symbolizes cleanliness and sanitation, particularly when it is used in the bathroom. In fact, a generous use of glass lifts this room from the commonplace and makes it *modern*. Here both plain and mirrored glass combine with the new Vitrolux (color fused tempered plate glass) and Vitrolite (colorful structural glass) to elevate the bathroom to a new plane of beauty and convenience. Everything is designed for practical utility, and, in its design achieves a rare and distinctive beauty of its own. In keeping with modern design, the windows are large. When privacy is desired, it can be obtained without loss of light by glazing the windows with one of the many attractive patterns of Blue Ridge figured glass, or by the use of blinds.

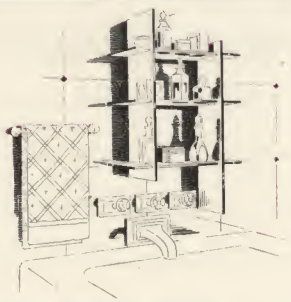
The interior of the bath of today fairly glistens with glass. The walls are bright and clean, and easy to keep clean when faced with Vitrolite structural glass or mirrors. Vitrolite finds great favor as a wall material for this room because this sparkling and sanitary glass is available in a wide range of permanent colors, hues and



● *A glass splash board behind the basin is attractive and lightens the task of cleaning.*



shades. Many two-tone sand blast, inlay and color-decorated effects are also possible. Walls of this material do not absorb odors and are very easy to clean, requiring only a damp cloth to retain their original brilliance. In modernization work Vitrolite may be installed with little fuss over old walls. Your local L. O. F. glass distributor would gladly build, on a demonstration panel, in actual Vitrolite, a sample section of a wall in various color



● *Glass shelving is obviously the thing to use in the bathroom.*

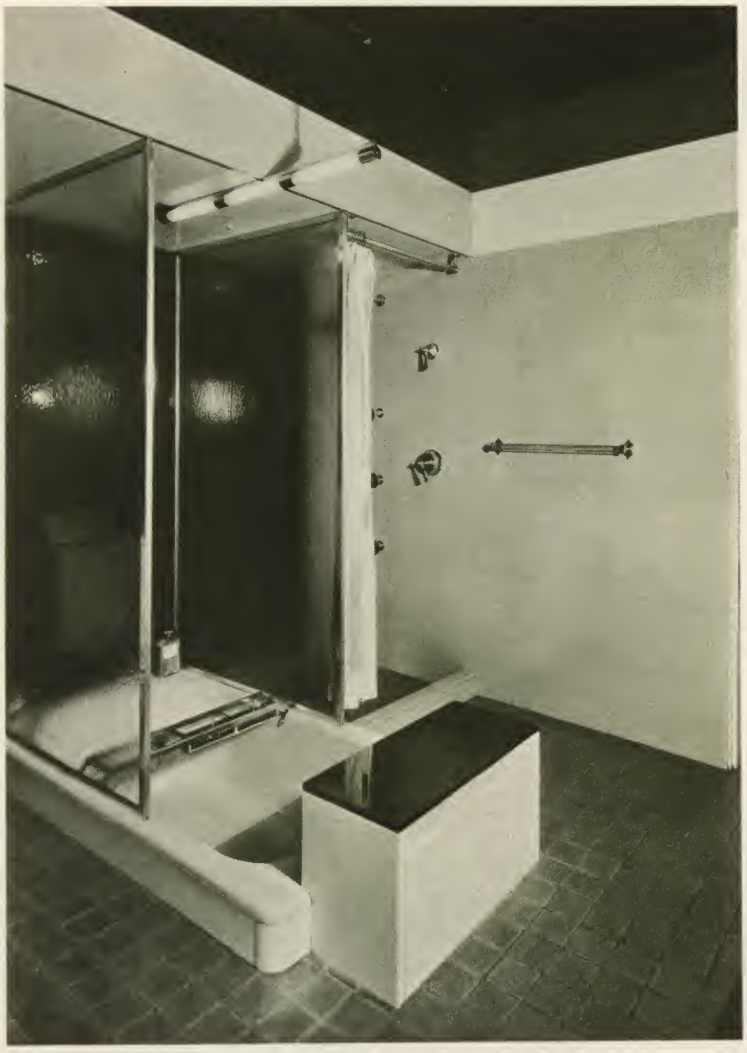


● *Metal-framed plate glass doors are a practical and attractive means of separating the different compartments of the bathroom.*

schemes for your selection. Be sure to see this demonstration of how effective colorful, modern Vitrolite will look in your home.

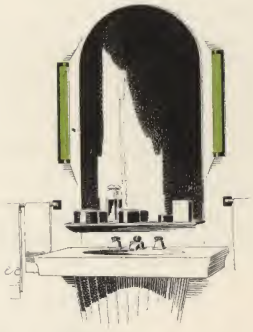
Vitrolux color fused tempered plate glass is available in a wide variety of colors and may be decorated with sand blast or acid etched designs. The newest use for Vitrolux is for bathroom ceilings which are lighted from above, as illustrated on page 19. The ceiling of this bathroom is of translucent white Vitrolux. The lighting fixtures above the glass result in an even distribution of light throughout the entire room and combine beauty and utility in a very effective manner. See page 26 for further information on Vitrolux tempered plate glass.

Mirrored wall sections are also much in vogue in today's modern bathroom. Here again decorative designs may be sand blasted or etched on the glass if desired. A mirror over the basin goes without saying, but the man of the house will be grateful for a large one. The use of new and more sensible lighting fixtures and the proper placement of the mirror in relation to daylight are important considerations that will add greatly to the usefulness of this important accessory. Metal framed doors of polished plate glass are often used to separate the various facilities of the room. The stall shower with a glass door is a great convenience and aids in giving the room a neat appearance. Several other effective uses of glass are illustrated on these pages. Note, particularly, the obscure glass screens on either side of the sunken tub. In the bath, where the lighting is usually brighter than in other rooms, insistence on high quality of the glass will be reflected in added beauty and distinction.





● *A full length mirror in the bathroom door is desirable.*



● *A large mirror above the lavatory is essential in every well designed bathroom.*



● *Mirrored walls around the tub are both practical and beautiful.*

BRILLIANT, SANITARY KITCHENS



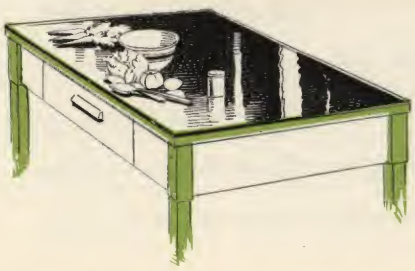
A mirror for the maid is a minor investment that is bound to pay dividends in a more satisfied worker.

Contemporary design rescues the kitchen from the comparatively lowly role it played in former years, dignifies it with new beauty and makes it especially notable for daylight brightness on a par with any other room in the house. This is a logical, practical evolution. Just as modern factories are daylighted with large window areas, so the kitchen, which is in reality, a domestic workshop, is now commonly marked by unbroken window walls wherever such construction is at all possible. The examples illustrated are typical of the current trend. The remarkable part is that this great change in the kitchen has come about not through the expenditure of more money, but simply at the expense of a little more thought and ingenuity in planning. The cost remains practically the same as that of the old-style, poorly-lighted room that made work in the kitchen a thankless drudge.



Glass shelves that hang in the window and move up and down with it are both practical and attractive.

Vitrolite—the colorful structural glass, finds great favor as a wall material for kitchens. This sparkling and sanitary glass is available in a wide range of striking colors, hues and shades. Vitrolite colors are permanent. Walls of this material do not absorb odors and are very easy to clean, requiring only a damp cloth to maintain its original brilliance. In modernization work, Vitrolite may be installed with little fuss over any permanent dry wall surfaces. Before you finally decide on your kitchen, have your local L. O. F. Distributor show you sample walls and the various colors and combinations of colors available.



A glass top for the kitchen table is sanitary, practical and decorative, all in one.

OF COLORFUL

Vitrolite





Glass doors for cabinet space make it easier to find what you want and add to the spic and span appearance you expect in your kitchen.

Double Glazing

ARE ESSENTIAL TO

. . . THEY LESSEN HEAT LOSSES



The ever-increasing demand for air conditioning in the home has given prominence to the necessity of double glazing of the windows in order to obtain maximum efficiency of the air conditioning plant. With winter air conditioning, double glazing is highly desirable, otherwise condensation and fogging of windows is likely to develop to an objectionable degree (see table on opposite page). Even if you do not contemplate air conditioning, double glazing greatly reduces heat losses and heating costs. Tests show that a saving of 20 per cent (or one ton of coal out of every five burned) can be reasonably attributed to the installation of double glazing or storm doors and windows. Other results of these tests show that

OR WINTER WINDOWS

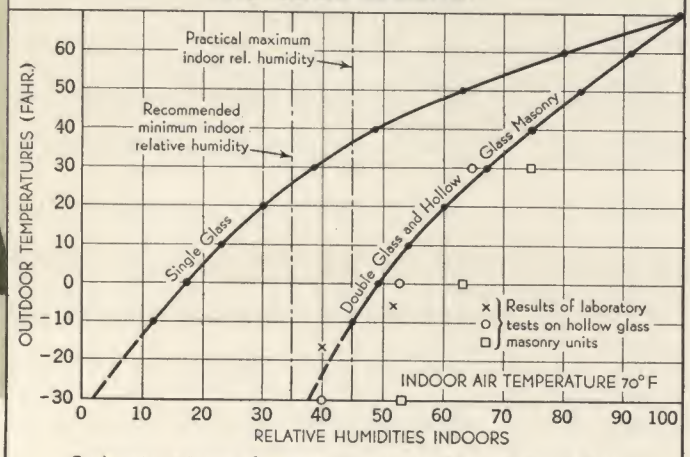
SUCCESSFUL AIR CONDITIONING . . .

AND THUS *reduce heating cost*



storm sash practically eliminates the entrance of soot; that higher relative humidity can be maintained indoors before condensation appears on the glass; and that storm sash or double glazing reduces the draft of cold air down the windows and thus increases the temperature of air near the floor. By all means, include Double Glazing or well-made Winter Windows in your plans. They are permanent improvements to your home and soon pay for themselves in the fuel they save. Do not fail to talk this over with your architect.

CHART I - CONDENSATION ON WINDOWS AND GLASS MASONRY



Condensation or fogging of windows will occur in winter in most parts of the U.S. if single glass is used and indoor relative humidity is maintained within the desirable range. Double glazing and hollow glass masonry cut heat losses approximately in half and greatly reduce likelihood of condensation

The U. S. Bureau of Standards reports that Winter Windows save from 10 to 15 per cent of fuel costs in houses with no other insulation. In insulated houses the savings are reported as being as high as 60 per cent. Approximate fuel savings in dwelling houses:

	Saving Per Cent
No insulation, weather stripped	15 to 20
Same, with double (storm) windows*	25 to 30
½ inch insulation, not weather stripped	20 to 30
½ inch insulation, weather stripped	About 40
½ inch insulation, with double window*	About 50
1 inch insulation, weather stripped	About 50
1 inch insulation, not weather stripped	30 to 40
1 inch insulation, with double windows*	About 60

Taken from circular of the U. S. Bureau of Standards No. 376, entitled Thermal Insulation of Buildings.

*"Double Windows" ARE WINTER WINDOWS

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TUF-FLEX
TEMPERED
AND VITROLUX
COLOR FUSED TEMPERED
PLATE GLASS



A 12x48-in. light of Tuf-Flex twists through an angle of 20 degrees without failure. Regular plate glass of the same size and thickness failed at 7 degrees.

The TEMPERING PROCESS which is applied to both Tuf-Flex and Vitrolux is accomplished by reheating and cooling regular polished plate glass. This tempering in no manner affects the appearance, clarity or chemical composition of the glass. Its physical properties, however, are decidedly different, due to the changed stress-strain differential between the outside surfaces and the central portion of the glass. This tempering process makes the glass much stronger than regular plate glass of the same thickness and considerably more resistant to impact and thermal shock. This added internal strength recommends either Tuf-Flex or Vitrolux for many specialty uses. Vitrolite Structural Glass can also be tempered to give extra strength and greater heat resistance. While this tempering process does not render the glass unbreakable, it does limit the susceptibility to breakage ... Chipping or puncturing the surfaces or exposed edges causes the glass to disintegrate into small crystals, and if not framed, the crystals have a tendency to fly.

TUF-FLEX TEMPERED PLATE GLASS is ideally suited for shelving in the bath, closets and bookcases; for table tops that get a great deal of service and for fire screens. Tuf-Flex is available in clear or colored plate glass. Tuf-Flex can be furnished silvered, ground or etched in any sizes up to 48″ x 48″ and in thicknesses from ¼″ up, the one exception being Tuf-Flex made of colored plate glass, which is available in 7/32″ only. Tuf-Flex glass cannot be cut after it is tempered, consequently, the exact sizes required must be specified.



Tuf-Flex does not break when molten lead is poured on it, even though the ¼-in. light rests on a cake of ice. Regular plate glass, similarly tested, shattered instantly.

VITROLUX COLOR FUSED TEMPERED PLATE GLASS, as its name might imply, is available in color only. It differs from Tuf-Flex Colored Plate Glass only in the manner in which the color is obtained. The wide range of colors—some opaque and others in varying degrees of translucency—are obtained by *fire fusing* ground colored glass onto regular plate glass during tempering. Thus the ground colored glass actually fuses into and becomes an integral part of the plate glass. This method assures permanent, fast colors which are practically fadeless. Very striking effects are obtained when it is used in conjunction with concealed lighting behind the glass. It is very effective for "ceiling-glow" lighting of bathroom, kitchen, foyers and other rooms in the house. The same size limitations and specifications as indicated above for Tuf-Flex, apply to Vitrolux.

DON'T TAKE *Glass* FOR GRANTED

The current movement in house design puts a new emphasis on the importance of selecting the right glass for specific purposes. The following brief outline may help you in selecting the right product of Libbey-Owens-Ford for each specific purpose. It is a concise summary of current glazing practice:

"A" Quality Labeled Double Strength Sheet Glass is generally used in glazing the more modest residence. However, even in smaller homes, when large window areas are specified, the owner will be wise to use L. O. F. Polished Plate Glass. It adds surprisingly little to the cost of the home and adds immeasurably to its appearance. For mirrors, you want, of course, the very finest L. O. F. Polished Plate Glass. This is known as "Silvering Quality" and is used almost exclusively in making fine mirrors. The next quality, "Mirror Glazing," is often used for high-grade glazing work. Most of the plate glass used in glazing, however, is called "Glazing Quality." Definite requirements for tolerances in thickness and dimensions are set up by U. S. Government specifications. Blue Ridge Figured or Wire Glass is used in many bathroom windows and wherever obscurity is desired.

Current architectural trends have introduced figured glass as screens, interior partitions, panels and lighting fixtures. This glass greatly reduces glare and acts as an excellent diffuser of light. For bathrooms and kitchens, you will probably combine glass and mirrors with Vitrolite. Used on the walls, this colorful structural glass creates an exceptionally beautiful appearance and is very easy to keep clean, retaining its brilliant lustre indefinitely. For shelves, fire screens, ceiling-glow lighting and other places where greater strength and resistance are desirable—Tuf-Flex, the tempered plate glass, or Vitrolux color fused tempered plate glass, is the logical medium.

If you contemplate an air-conditioning system in your home, be sure you discuss with your architect the question of double glazing, which is highly desirable. Here, it may be advisable to use AKLO, a heat-absorbing glass of special chemical composition. Ask about it.

The above outlines, in a very general manner, the applications to your new home of the complete line of flat glass products made by Libbey-Owens-Ford Glass Company, Toledo, Ohio, and the Blue Ridge Glass Corporation of Kingsport, Tenn.

LITHO IN U. S. A.







LIBBEY·OWENS·FORD GLASS COMPANY manufactures and distributes a complete line of flat glass. This includes the highest quality Plate Glass for glazing, mirror manufacturing, furniture tops, etc.; Safety Glass; Flat Drawn Sheet Glass; Polished Plate Glass, both clear and in colors; Heavy Sheet Glass; Greenhouse Glass; Tuf-Flex Tempered Plate Glass; Vitrolux Color Fused Tempered Plate Glass; Vitrolite Opaque Structural Glass; Aklo Heat-Absorbing Plate Glass; and distributes the Figured and Wire Glass manufactured by the Blue Ridge Glass Corporation of Kingsport, Tenn.

Libbey·Owens·Ford Glass Company owns and operates eight factories. They are strategically located at Toledo, O.; Rossford, O.; Charleston. W.Va.; Parkersburg, W.Va.; Ottawa, Ill.; and Shreveport, La. Leading glass jobbers, conveniently located throughout the United States distribute the products of these plants. Direct factory sales representatives to serve efficiently the architectural profession are located in New York, Syracuse, Boston, Atlanta, Minneapolis, Chicago, Philadelphia, Kansas City, Denver, Detroit, Shreveport, Buffalo, San Francisco, Los Angeles, Cincinnati, Seattle, and Richmond, Va. The executive offices of the company are located at Toledo, Ohio.













MASONITE

In Home Design · Construction

. . . Decoration . . .

INSULATION · PRESDWOOD · QUARTRBOARD · TEMPRTILE · *Century of Progress* FLOORING

TRANSPORTATION has been streamlined, made faster and more efficient. Means of communication have been almost magically improved. Life expectancy has been increased. The frontiers of knowledge have been advanced. Remote parts of the world have been explored. New textiles, foods, and appliances have been invented.

But perhaps no greater progress has been made during the last few years than that made in home design, construction and decoration.

In the pages of this booklet a number of these important advancements are described. Because they so definitely affect your daily comfort and enjoyment we sincerely believe you will be interested. Because of the part Masonite products are playing in these accomplishments we have an admitted selfish interest in picturing and detailing them to you.

It is our hope that this booklet will help show you how to take advantage of these developments in building a new, durable, modern, comfortable, convenient, and beautiful home of your own, or to put your present home in step with the times.

MASONITE CORPORATION

111 W. Washington Street **Chicago, Illinois**





A lovely Classic Modern entrance hall with walls of Tempered Presdwood in natural finish, the horizontal bevel edges forming V-grooves. The ceiling is also of Tempered Presdwood, painted, and grooved. A dignified, hospitable hallway of striking beauty

THE FIRST "home" of primitive man was the place where he brought his game when he killed it, the place where he ate, slept, made his flint implements, and lived. But as time went on, it soon was realized that this rude shelter was not enough. Man wanted a better protection from the freezing winds of winter, and the blistering suns of summer. He wanted comfort — and as his appreciation of beauty increased — he wanted something more than a few hieroglyphics on the walls to decorate his home. As he became more secure, he wanted a home of greater durability and permanence. But because the struggle for existence was still a problem, he wanted all this with an economy of effort and expense.

Better Homes Become Goal of Mankind

COMFORT, beauty, permanence, and economy — these four elements have been the goal of mankind in the design and construction of his home down through the later ages. As civilization has progressed, great strides forward have been made in all these particulars. Modern millwork, masonry, metal manufacture, textile weaving, plastics, air conditioning, electric wiring, not to mention such things as automatic refrigeration, radios, vacuum cleaners and the like, have brought man's home nearer and nearer to its objective.

It so happens that within the last few years major advances have been made along all these fronts. Among the most important of these advances are the following:

(1) Adequate insulation to help provide warmth in winter, coolness in summer.
(2) Simplicity of architectural style and interior construction, and
(3) A utilization of the emotional value of color in home interiors.

It will be readily seen that insulation advances man's ideal of comfort, and that style and color advance his appreciation of beauty. In the practical working out of these, it will be realized that greater permanence and economy are also achieved.

Home Insulation Now is an Important Requisite

WHEN you take the plans for that new home of yours to your architect or builder or lumber dealer, you will be told that insulation is now one of its most important requisites. It is as important as plumbing, central heating or electric wiring. Properly insulate your home, they will tell you, and it will be modern for many years to come. Fail to do so, and it will be as obsolete as a model



Presdwood walls, grooved in a smart triple-line vertical motif, and painted a soft blue, provide complementary color tones of unusual richness in this attractive living room. The ceiling is of QuartR-board in natural brown finish, heightening the loveliness of the rug

T Ford. And for a good reason. Properly insulated homes keep out the winter's cold and also the summer's heat.

But, you may ask, aren't ordinary walls thick enough to do all this? The answer is "Yes, if you build them thick enough!" But no one wants to build them that thick because of the expense involved. Besides, such thickness is no longer necessary. Science has developed an insulation board which because it is filled with millions of minute air cells, effectively resists the passage of heat or cold. It is called Masonite Insulation, and is made by exploding clean wood chips under high pressure steam, then felting and pressing the tough wood fibres into sturdy boards.

Insulation Gives Comfort Plus Economy

WITH THE use of Masonite Insulation you can now achieve comfort the year 'round. Heating plants can be smaller, and less costly to operate. Fuel bills can be reduced as much as 20 to 33 per cent. Masonite Insulation reduces drafts. It cuts down heat and cold infiltration and makes it safe for little children to play with their toys on the floor without the danger of constant temperature changes.

How is this Masonite Insulation used? In several ways. First, as roof insulation. A roof well insulated can by itself make as much as 20 per cent difference in your fuel bill. Second, Masonite Insulation is built into the exterior walls of your home, under the wood siding, brick, stucco or other exterior finish. It is also used under floors not only for insulation but for its sound deadening properties as well. For these purposes Masonite Structural Insulation is used — it comes in sturdy boards four feet wide and up to twelve feet in length.

Masonite Insulating Lath is also used inside your home. It makes an excellent plaster base because it holds plaster with a mighty grip. In tests, a pull of 1000 pounds per square foot was exerted before the bond of plaster to board was broken. Because it stops heat, lath marks do not show. For this use Masonite Insulating Lath, which comes two feet by four feet with the four foot edges shiplapped, is recommended.

Boards of Rare Beauty Need No Decoration

SO RICH and lovely is the natural brown color of Masonite Insulation that it is being increasingly used in its natural state — although it can be easily painted. As will be explained later in this booklet, smart, modern effects are being achieved by using the board in its natural color with beveled edges and tooled or sanded



The cheeriness so desirable in the dining room is achieved here by rich walls of De Luxe QuartRboard left natural except for its bright trim of red, with ceilings of white painted QuartRboard, grooved and striped to match the carpeting and the draperies

designs. Boards of such beauty need no decoration.

One of the most important features to consider about any insulation is its moisture-resistant qualities. Insulation that absorbs moisture, becomes soggy or packed down, loses much of its efficiency. Masonite Insulation is highly moisture-resistant. It will not chip, crack or warp. It contributes to comfort with its insulating and sound deadening qualities. It is economical to install and works economies in fuel bills. It is beautiful in itself and lends itself to many decorative treatments. Thus does Masonite Insulation make a substantial contribution toward man's ideal home.

Simplicity in Home Exteriors and Interiors

In our desire to achieve beauty, mankind has frequently fallen into the pitfall of over-ornamentation. On most every avenue and in every village you can still see examples of such a transgression in the last generation — ugly, overdressed relics of a Victorian era, those monstrosities of architecture, the turreted, balconied, wide-corniced, furbelowed house, reminiscent of women in bustles and men in peg-top trousers and button shoes.

Our recognition that simplicity, sincerity and practicability are the really beautiful has led us into two developments architecturally. We have taken the best of the traditional and made it lovely. The classic simplicity of the various Colonials and Early American types, the rugged charm of the English, the graciousness of the French, the stateliness of the Italian, and the rambling picturesqueness of the Spanish have been idealized by modern treatments into homes of rare beauty. At the same time a new architectural style had been born. For want of a better name we call it Modern. Like the adaptations of the traditional, the Modern puts the emphasis on simplicity. Unnecessary ornaments are shunned. Homes are planned for modern conceptions of orientation, recreation, functional uses, and the wealth of modern materials are used with frankness and without attempts to follow conventional styles.

This simplicity and honesty in exteriors has naturally permeated the interiors. We are eliminating the frills, the highly ornamented wainscotings, the over-fluted woodwork, the plate rails and scrolled grills. In their place we are choosing materials that provide utmost utility and yet are, or can be made, beautiful.

A Range of Products for a Range of Uses

It is only natural that for these purposes Masonite products are so frequently chosen. We have already



Practical and lovely are kitchens such as this of Presdwood Temprtile lower walls and Tempered Presdwood upper walls and ceilings. These gleaming surfaces are easily cleaned, and will not crack, chip or warp. The several shades of green are especially effective

seen how Masonite Insulation fills the utilitarian purpose of keeping out cold in winter, heat in summer, and yet can serve as interior finish, too. But Masonite Insulation is but one of a family of five principal products, each with a distinct use in your home.

Masonite QuartRboard is a semi-hard board that, like its companion products, can be sawed, planed, sanded, nailed, cemented, painted, varnished or lacquered; yet it will not chip, crack or warp. Masonite QuartRboard is used for walls and ceilings, either in its natural rich brown color, or painted, or beveled. Rooms finished in QuartRboard suggest dignity, quality, modernity, and beauty. It comes in large, but easily handled and easily cut, panels that make application simple.

Presdwood, "The Wonder Wood of a Thousand Uses"

MASONITE Presdwood has been called "the wonder wood of a thousand uses." It is a dense, hard, smooth-surfaced board in various thicknesses from one-eighth inch up. Presdwood is the ideal finish for walls, and particularly for wainscotings. Such walls answer the need for permanence and durability. Presdwood provides the simplicity that is beautiful as well. Presdwood is knotless and grainless. It is tough. The ordinary bumps and thumps of daily life will not dent it. It will not split or crack, yet because it is made of wood it is easily workable. Tempered Presdwood is the ideal material for table tops, cabinets, desks, as well as for store fronts, sales displays, sign boards and multitudinous other uses. You can paint Presdwood any color you desire.

Masonite Temprtile for Kitchens and Bathrooms

MASONITE Temprtile is an outstanding contribution in making modern kitchens and bathrooms practical and gorgeously colorful. You who have always wanted the beauty of gleaming tile can now — with Presdwood Temprtile — have baths and kitchens of rare beauty without paying the cost of ceramic tile. And Temprtile, properly applied will not chip, crack or warp. It can be finished in any color. Temprtile walls can be washed easily. Temprtile is the modern answer to the need for durability, economy and beauty in two of the most-used rooms of your home — the bath and the kitchen.

Masonite Century of Progress Flooring is the fifth member of the Masonite family of products. Here is a floor covering that, for certain areas is ideal from a



The epitome of modernity and smart loveliness is this bedroom, with ceiling of Masonite QuartRboard and Insulation, painted oyster white, and walls of Masonite QuartRboard, painted mulberry. An exquisitely colorful room that will STAY lovely always

cost-service standpoint. It is a floor covering of low cost suitable for entrance hall, study, den or certain types of living room. It should never be used in bathrooms or kitchens.

Color is Making Homes of America Enchanting

INTERIOR designers and architects now refer to the age just preceding the present decade as the "mud and mustard dinginess" of the past. We talked of "symphonies in sepia" or in blue, or in green, but we used the grayed shades, and without the compensating magic of complementary hues.

Now we realize that we have been overlooking the most important asset of color, its emotional effect. We are now copying the joyousness of nature. We are capturing the stimulating loveliness of spring and summer, the delicate blendings of vari-hued flowers, the soft harmonies of the sunrise and the sunset, the daring contrasts of the rainbow and, with Masonite left natural, the rich warm brown of autumn—and putting these lovely color tones inside our homes where they can have a definite effect on our spirits and our sense of beauty. We are lifting our homes out of the commonplace. We are dressing them in beauty. We are making them modernly alluring, stimulating or soothing, effervescent or quieting all with color.

With color, we are getting that intangible thing called PERSONALITY into our homes. We are finding that color can so enchant us that all other details are overwhelmed. Hence, because it is such an important factor, we are attempting to go about it intelligently. We are utilizing the recent scientific study of color to achieve proper color combinations and balances.

"Oh!" we hear you say, "But I don't understand colors. It's all too deep for me." Of course! So may good music be quite beyond you until you learn a little more about it. There may be a few persons who have a natural color sense, just as there are certain geniuses with a notable talent for music. But just as it is unnecessary to have a heaven-born ear for music to learn to enjoy good music, so is it unnecessary to have an innate eye for color to appreciate the value of color.

The Emotional Values of Color in Home Interiors

JUST AS certain types of people like certain types of music — ballads or jolly tunes, solemn cadence or sprightly swing — so certain people react differently to colors. For example, red is an elemental color. It expresses fire, energy, warmth. To many it stimulates, it cheers



Presdwood Temprtile is the ideal wall surface for bathrooms. These smooth, durable boards can be painted any color desired. Grooved into squares as shown, they give a tile-like appearance at a surprisingly low cost. Here is a modern bathroom in good taste

or it excites. Such persons generally find an excuse for getting at least an accent of it around somewhere. Yet to others red may have little or no appeal. You may love yellow or blue. You have definite favorites and these should be helpful in your choice of color in your home.

Nature's Own Rich Brown is Brought Indoors

WE HAVE spoken of browns. Brown essentially is one of the loveliest of hues. It is our previous use of brown that has been too often faulty. We have surrounded it with colors or shades that reduce it to the minimum of beauty, whereas it can be made the acme of beauty. Nature has provided us with many rich, mellow browns. Much of the earth is brown; many tree trunks are brown. Millions of people have brown hair, brown eyes, and a lot of us spend painstaking hours on the beach or on the golf course to achieve a delicious suncoat of brown. Brown, in the new conception of color in the home, is rich and appealing in itself and enhances the value of every other color tone used with it.

And so on down the various color hues. Each normally has its particular effect on our senses when used under certain circumstances. To outline them all would require several volumes. Let us learn more about HOW color is used in the home.

Along with this desirability of color in the home has come the need for finding ways of using it. Obviously, ceilings and walls of a room must play an important part in the color orchestration — one prominent decorator has likened them to the important violincellos in a symphony orchestra. They support the theme of the ensemble. They provide the background for the other decorative notes.

Masonite Products Lead the Way to Color Beauty

BUT TO have ceilings and walls capable of taking color is not enough. To meet modern demands — they must be durable. THEY MUST NOT CHIP, CRACK, OR WARP. They must RESIST MOISTURE. Here again, as in the need for simplicity of line, Masonite products form the logical answer. Masonite Insulation for interior finish, Masonite QuartRboard, Masonite Presdwood, Masonite Temprtile, Masonite Century of Progress Flooring are selected by home decorators and designers because these materials are beautiful in their natural state, or with the exception of the flooring, can be finished in any color desired. The trend toward streamlining is being reflected in the use of horizontal and vertical lines, sub-



A glorious recreation room at low cost! The walls are of QuartR-board in its natural finish, beveled in a smart design. The ceiling is of Masonite Insulation, also beveled. The floor is Masonite Century of Progress flooring. An ideal spot for bridge or billiards

ordinate to the main effect or the color. These Masonite products lend themselves perfectly to such treatment. Beveled edges, grooved designs, and strips of metal are natural counterparts to Masonite installations. Thousands of satisfied homeowners are enthusiastic not only over the beauty of their Masonite interiors, but over their economy and durability as well.

Masonite Products Place Man Nearer His Home Goal

THUS IT can be seen that the present decade has taken us a long way toward man's ideal of a home. Comfort, beauty, permanence and economy are being achieved in greater degree than ever before. We are insulating our homes for year around comfort, simplifying their interiors for beauty and permanence, using color for its emotional and esthetic effect, and — with Masonite — effecting economy as well.

Building a new home or modernizing an old home is an important step in the life of each of us. We can not go about it with the same nonchalance that we buy this season's hat or this summer's suit. We expect to live in and enjoy our home for a generation, and hope that others may enjoy it for generations in the future. We want our home to express our personality and our tastes. We are concerned with quality of materials. We take time to find out about the new developments of the last few years.

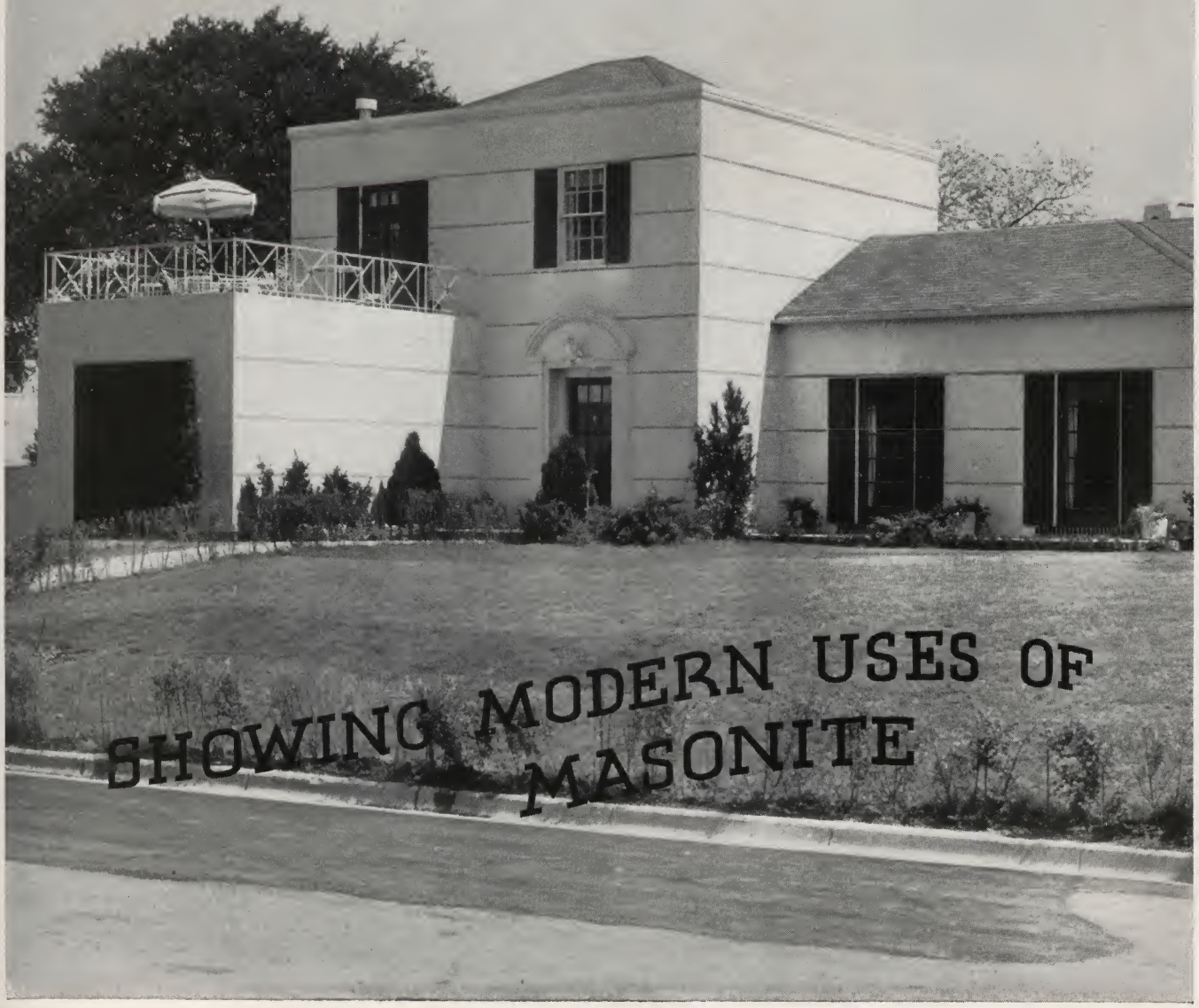
That is why we who present you with this booklet hope that you will be guided to a certain extent by the principles set forth here. If you are so guided, your home will be a more delightful place in which to live — a source of constant delight to you, a home your friends will certainly admire. In the pages that follow are additional examples of modern home design, construction and decoration, as well as more detailed specifications of Masonite products.

Helpful Suggestions Are Yours for the Asking

NOT EVERYTHING concerning Masonite can be included in even a single volume. Nor can all the beautiful, varied effects achieved by thousands of home owners be pictured. It is our sincere desire, however, that what we have selected to show you, will arouse your desire to put your present home in step with the times, or to make your new home a thing of beauty, comfort and convenience. If you have home building problems particularly your own, which this publication does not answer, write us about them. To do so places you under no obligation.

SELECTED VIEWS

FROM HOMES, STORES
AND OFFICES OF
SATISFIED USERS



Famous Artist Chooses *Masonite* To Restore His Home

GRANT WOOD, famous for his "American Gothic," "Daughters of Revolution," and "Dinner for Threshers," which he painted on Masonite Presdwood instead of on canvas, might also take a bow for distinguished work in the field of home decoration. Recently he and Mrs. Wood, herself an artist in operatic circles, purchased and re-created a charming old pre-Civil war homestead in Iowa City, Iowa. Their problem was not only to restore traditional loveliness to an old, age-withered landmark, but to do it economically and yet permanently. They naturally selected Masonite.



A faithful reproduction of the webbed and grooved walls of pre-Civil war days was achieved with Presdwood, shown in the vista above, and the gracious and graceful staircase below





At RIGHT is the quaint dining room in the home of Mr. and Mrs. Wood. The upper part of the walls is papered in white, and the cabinets and wainscot are made of grooved Presdwood

The large rectangular living room of the Grant Wood home, with its fireplace walls finished in grooved, painted Presdwood



MR. AND MRS. WOOD found the simplicity of webbed and grooved walls could be admirably achieved by installing large sections of Presdwood, grooved before installation into a faithful reproduction of the pre-Civil war motif. They discovered that the original beauty of smooth, painted wainscot and cabinets in combination with early Victorian wallpaper could be acquired by making the wainscot and cabinets of smooth, grainless and splinterless Presdwood. They used Masonite Insulation on the ceilings, painted in a light color to go with the color scheme, and Masonite Insulating Lath as a base for plaster on certain of the upper sidewalls. Thus they could be sure not only of an enduring restoration, but a quiet, comfortable home, too.

At left is a closeup of the dining room wall, with a vista of the living room beyond. No chance for these walls to chip or crack!

Smart New

MASONITE TREATMENTS





The entrance hall shown in the upper photograph is an example of the striking beauty of Presdwood combined with horizontal strips of aluminum to give an effect of width to what is actually a high-ceilinged hallway. The darker coloring of the ceiling also contributes to lowering the apparent height of the room. The living room corner illustrated immediately above shows another use of Presdwood with copper, in modish triple bands for spaciousness

Using Chromium, Aluminum or Co

ONE OF the most characteristic symbols of the streamlined age is the horizontal line. One of its most attractive applications is in the interior decoration of the home. With metal strips — gleaming, silver-like, non-tarnishing chromium and aluminum, stainless steel or rich burnished copper — this horizontal line motif combines delightfully with various Masonite products. They can tastefully be used singly, or in double or triple parallel lines.

Numerous smart effects are easily achieved. The photographs on this page show examples of Masonite Structural Insulation, Masonite QuartRboard, and Masonite Presdwood forming the panels between which is laid various types of metal strips. Such battening also serves the utilitarian purpose of neatly sealing together the wood boards. Any number of gorgeous color effects can be used, and in actual practice you will find them enriched by the shiny bands of metal.

Line motifs serve many purposes in the interior designer's book of tricks. Used horizontally they make high-ceilinged rooms look more spacious; used vertically they make low-ceilings appear higher. Together they make interesting patterns, and provide a nice contrast in texture.



THE HOMEMAKER cannot give too much thought to the appearance of the entrance hall and living room of her home. It is in these rooms that her tastes are most frequently on parade before guests. Modern designers favor a minimum of furnishings in the entrance hall. This throws an added emphasis on the need for attractive walls and ceilings. Generally the "rule of one" is adopted — one small chair, one small table or bench, or small mirror, and one small picture. Tastefully arranged, against a background of richness such as is possible with Masonite, even the simplest entry looks appealing.

The keynote of today's living rooms, whether traditional or modern, is convenience and comfort. They must be arranged to give greatest accessibility and yet orientation. They must provide adequate light by day and by night. They must be furnished with easy, restful chairs. The living room is just what its name implies, a place for relaxation and every day enjoyment. Walls, which are the backgrounds, must contribute to both. Colors must stimulate or reflect the finest mood of the family. They must match in richness the furnishings. They must be easily kept clean, and free from cracking, warping or splitting. To all of these requirements Masonite products provide the ready and complete answer. Masonite walls and ceilings not only make possible beauty, smartness, and personality, but they are economical, too. They are easily installed, and will retain their attractiveness for years. They can be used in their rich natural brown color, or painted any hue desired.



pper Strips

INSET RIGHT: A refreshingly modern treatment of Masonite QuartRboard with beveled line ceiling, and chromium strips to set off a book case, as well as give an attractive horizontal line effect



RIGHT: Living room in the House of Tomorrow for the General Electric Company, Cleveland. Presdwood walls and ceiling, and Masonite Century of Progress Flooring. The strips give it spaciousness





The lovely dining room shown at the top of the page has sidewalls and ceiling of Masonite Insulating Lath as a plaster base. Acoustical plaster is used over the ceiling, and plaster and wallpaper in a plain but rich design on the walls. A splendid example of creating a soft texture to offset the naturally hard-surfaced appearance of table and chairs

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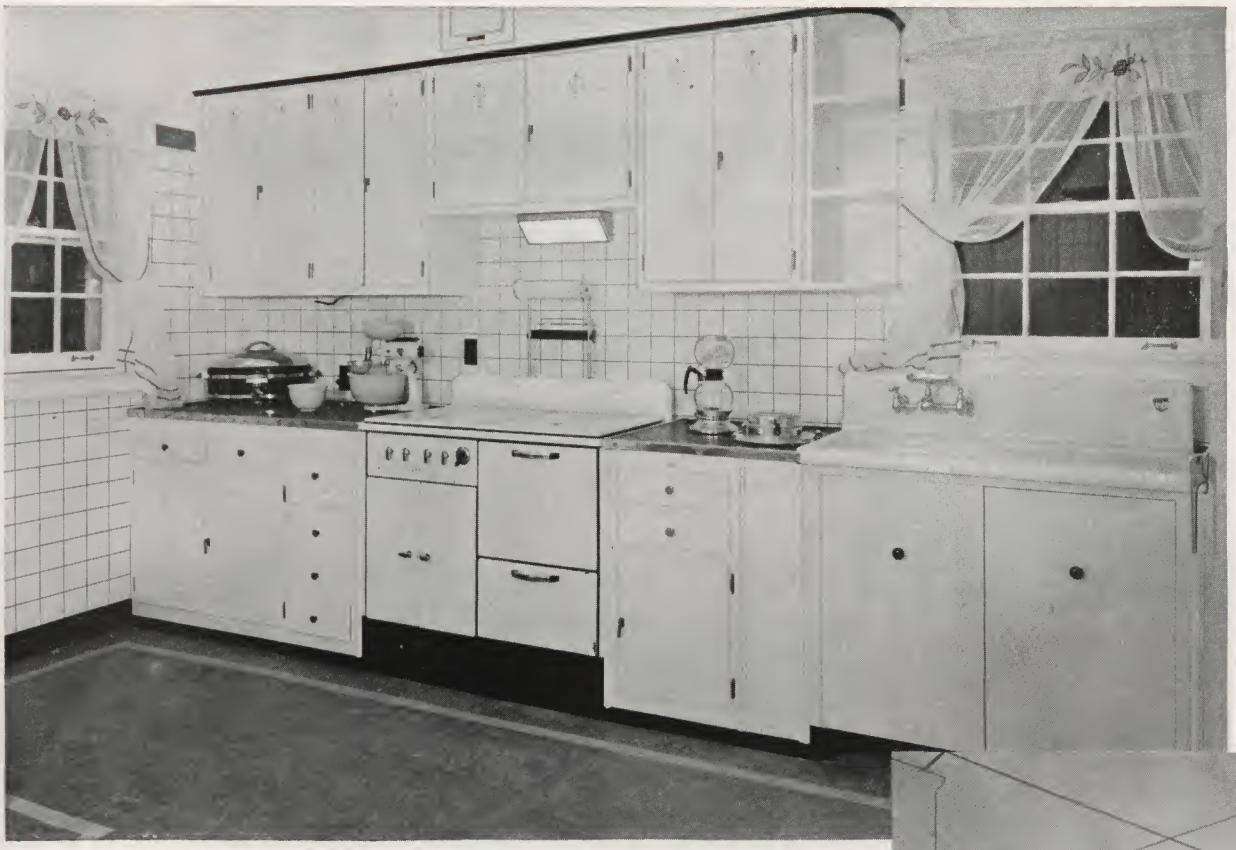
The breakfast room in the lower illustration is a sprightly treatment in the modern manner of an attractive paper over plastered Masonite Insulating Lath. The ceiling is of Redwood. A room like this, with an excellent vista of the garden, can have a definite effect in inducing appetite. Masonite's ways of making your room charming, are endless

Atmosphere For Appetites

JUNIOR doesn't eat his spinach. Mary Ann won't finish up her green beans. Even Dad's zest for tenderloin steak is lagging. Your cooking mediocre? No! Perhaps you should look to your dining room! Scientists say that color and attractiveness of surroundings have a lot to do with appetite. Aviation companies change air liner interiors from certain shades of yellow to light blues and greens, and reduce the cases of air sickness. Restaurant owners replace cold, unpleasant colors with warm, luscious ones, and sales jump. Appetite waits on wall coverings, if you please, so look to yours.

With Masonite you can choose your own color partners. Masonite Insulation, grooved and beveled, is most attractive on sidewalls in its natural state. And of course you can paint it as you will. For added richness you may prefer any of the varied treatments of QuartR-board or Presdwood. Perhaps your tastes run to scenic wallpaper, the companionship of "Voyage en Suisse" or the "Fetes de Versailles." Masonite Insulating Lath holds plaster with a firm grip, and will thus make possible the most intricate or the most simple wallpaper design without a crack or a chip to mar its beauty.

Let Masonite boost appetite! Let any of these lovely interiors set the proper mood for the room and its occupants. Dining room furniture by its very nature is simple and restrained in coloring and design. Walls and ceilings are depended on for brightness, cheeriness, warmth and beauty. Wise homemakers see to it that more than usual attention is given to the proper materials — hence the trend to Masonite.





Lovely Labor-Saving Kitchens

THE ENGINEER has collaborated with the decorator to make modern kitchens practical as well as lovely. Scientifically prepared floor plans save steps from sink to stove, cupboard to refrigerator. Three principal working areas are grouped together, and where possible, controlled by a fourth. They are: the receiving, storing and preparation area grouped around the refrigerator, the cleaning and disposal area around the sink, and the cooking and serving area around the stove. A fourth area, the control desk, is a place for the telephone, radio, and files of recipes. Every unnecessary motion is cut out, every extra bending over eliminated by proper placing and height of these working spaces.

The same sense of practicability is adopted in the decorative plan. Walls and ceiling in today's kitchens MUST be easily washable. They must withstand heat, cold, hard knocks. They must be resistant to stain or grease and easily freed of possible smoke marks or grime. Leading the way in this movement for beauty plus utility is Masonite Temprtile. Gleaming loveliness is achieved with Presdwood Temprtile at surprisingly low cost. The variety of treatments is infinite. A popular installation is a combination of Presdwood and Presdwood Temprtile, the former for the upper walls and ceiling, and the latter for the lower walls. Presdwood Temprtile comes in large boards, grooved to resemble tile, and can be had custom-finished in an assortment of colors, or you can paint it any hue desired. Once you have put Presdwood Temprtile on your walls, your upkeep worries are forgotten.

No bother to keep the walls and ceilings of these lovely kitchens immaculately clean. They can be washed easily with a damp cloth and a few seconds rubbing. The kitchen shown at top of page has lower walls of Masonite Temprtile, and the upper walls and ceiling in painted Presdwood. Such a room can be the chief "show place" of a home

•

The breakfast nook in the lower photograph is an example of Presdwood Temprtile walls and Presdwood ceiling. Kitchens as lovely as these of Masonite are inviting places for informal dining. You will be surprised at how easy and inexpensive it is to modernize your present kitchen with Masonite, or to plan a Masonite-lined kitchen in your new home



BEDROOMS OF BEAUTY

With the Alluring Restfulness of Masonite on Walls and Ceilings

ABOVE: Masonite Insulating Lath plastered and papered in this attractive bedroom shuts out many irritating noises. A charming room

INDIVIDUAL preferences rule supreme in the decoration of a bedroom. Here intimacy breeds contempt for what Tom and Dick and Harry may think of your decorative ideas. Let your bedroom look as YOU would like it. In general, a man's bedroom is inclined to be plain and severe, while that of a woman, especially a pretty and feminine woman, requires a light and skillful touch.

Masonite can be a help in either treatment. First of all, Masonite Insulation contributes to that most important element in a bedroom — quiet. Masonite Insulation on ceilings and walls makes for quietness that helps deep sleep knit up the ravelled sleeve of care. For the primarily masculine room, Masonite Structural Insulation itself is so attractive it can be used in its natural state, although most home owners prefer it only for ceilings, and apply QuartRboard or Presdwood over it on the walls. All these tough wood boards can be painted any color. They can be beveled in modern design, or combined with stainless steel, copper, or chromium strips. Or, since Masonite Insulating Lath is the ideal plaster base, it can be plastered then papered or tinted.



RIGHT: Masonite Insulation in beveled design on the ceiling, and QuartRboard with stainless steel strips on the walls, make for beauty



LEFT: Tempered Presdwood walls like these charmingly finished, can be painted in any colors desired, and will endure for years

YOU CAN go native in a Tempered Presdwood or Temprtiled bathroom. You can squirt sponges, slosh wet towels, splash shaving cream, let yourself go with abandon. Temprtile walls retain their distinctive beauty, reflect their air of luxury in spite of the gayest water capers. All that is necessary for immaculateness is a dampened cloth, a mild soap free of alkali and a few seconds light rubbing. And if you have read this booklet thus far you also know that properly applied Temprtile does not crack, split nor warp. In a word, you can have a bathroom of gleaming beauty — a tile-like surface that will retain its loveliness for a lifetime. Carrying out the trend toward straightforwardness is the bathroom shown at left, a study in black and white contrasts. In the bathroom below Tempered Presdwood enameled, is used on walls and ceiling.

The variety of treatments of Temprtile and Tempered Presdwood for bathrooms is almost unlimited. You can match your colored fixtures, or you can give them contrast; you can use white or use black or both, but whatever the color you can be sure it will maintain its original attractiveness down through the years.

BELOW: Bathrooms with Tempered Presdwood wainscots, walls and ceiling are easy to clean, are moisture resistant, will not crack or chip



SPLASH ALL YOU WISH!

Bathrooms of Presdwood Temprtile, In Gay Colors are Easily Cleaned



Dens Away From Dins

for Office Husbands

HOMES these days place emphasis on "functional use." Floor plans are laid out with an eye to the way we live in this modern age rather than the way we lived a generation ago. Thought is given to such things as modern entertaining and recreation, the automobile, the radio, the automatic refrigerator and other inventions which affect our habits. Especially do we provide a place for father or mother or children to pursue their favorite hobby or pastime. The man of your house, if he is an "office husband" may wish a place where he can work evenings. Or perhaps he is the methodical type who needs a room of his own equipped with a desk for keeping the house budget in order. Pictured on thesepages are typical examples of how such rooms can be made attractive and practical.



ABOVE: a tasteful combination den and extra bedroom sound insulated by Masonite Insulation in attractive beveled treatment. AT RIGHT: Masonite Insulation on the upper walls and ceilings in a modern design combined with wood wainscoting

Sound-Insulated by MASONITE

AWAY FROM the romping of Junior and Betty, away from the moaning saxophone next door, away from the car back-firing in the alley, away from the rumble of trucks in the street must be these snug, quiet retreats. Sound-insulation by Masonite Insulation makes necessary no sacrifice to beauty. As the illustrations on these pages show, Masonite adapts itself to any number of attractive beveled designs. It may be used in its natural rich brown color, or sacrificing the sound-absorbing property, it may be painted any desired color. And it offers a lifetime of service. Masonite Century of Progress Flooring is desirable, too, for dens. It adds an additional, attractive note, yet is low in cost, long in service, and is easy to keep clean.



Two all-Masonite dens that are modern as tomorrow, quiet, dignified, yet smart and modish. The two-tone effects on the ceilings are made by sandpapering. Note the easily-kept-clean Century of Progress flooring. Ideal haunts for today's husbands



Inviting Interiors for OFFICES



Modern wall designs like these can be easily achieved with Masonite Insulation or with Masonite QuartRboard

OFFICES receive hard, bruising wear, yet they must constantly reflect dignity, character, smartness. They must be easily cleaned of the grime of industry. Thousands of forward-looking office owners are using Masonite products to accomplish all these things. Masonite Insulation helps to make offices quiet and in its natural state with beveled treatment gives them a practical beauty that endures. Masonite QuartRboard and Masonite Presdwood, because of their added strength and toughness, are especially popular for walls and wainscoting. They can be grooved, beveled, or combined with chromium, copper or stainless steel strips and painted to blend in with any color desired. Moisture-resistant, knotless, grainless, splinterless, Presdwood gives a sleek, trim look — a substantial look — to an office.



Grooved walls of Presdwood or QuartRboard will not only look beautiful when installed, but will stay that way

Setting the Stage for MODERN SELLING

IN THE hard world of business, results count. Sales expenditures must be kept low, yet at the same time they must do the job. Modern merchants are learning the importance of setting the stage for selling, of creating the right atmosphere, whether their business be beauty salons, restaurants, or drug stores. Masonite products stand the test of small cost and big results. Easy to install, beautiful in themselves, they are being used increasingly for store interiors. Their smooth, rich surfaces give that inviting note which brings in trade.



Merchandise is displayed at its best in these panels of gleaming Presdwood. Note the table which is made of Tempered Presdwood

SOMEONE has figured out that a sales window must make a compelling impression on the passerby in six seconds. It must attract attention by its beauty or originality. Alert merchants are responding to the possibilities of Masonite-lined display windows, interiors of such rare beauty as to re-inforce their products in the bid for public interest. Such window backgrounds can be easily installed, and can be painted in any color to suit the product displayed.



Masonite Deluxe QuartRboard scored with fluting tool trimmed with metal moulding is smart treatment for window backgrounds

THE TOUGHNESS, durability and uniformity of Masonite products are suggesting other mercantile uses. The vogue for Tempered Presdwood cabinets, tables, desks, and benches is spreading rapidly. Tempered Presdwood is easily workable. It can be curved to suit most any design. Being splinterless and knotless, it presents no jagged edges to tear clothing or flesh. It is of uniform quality, and properly installed will not chip, crack, or warp. It can be used in its natural color, a rich brown, or painted any shade desired. The tables pictured in the lunch room at right are examples of a common use of Tempered Presdwood.

An attractive modern interior at low cost is this lunch room below, made of Tempered Presdwood wainscot with walls of Insulation





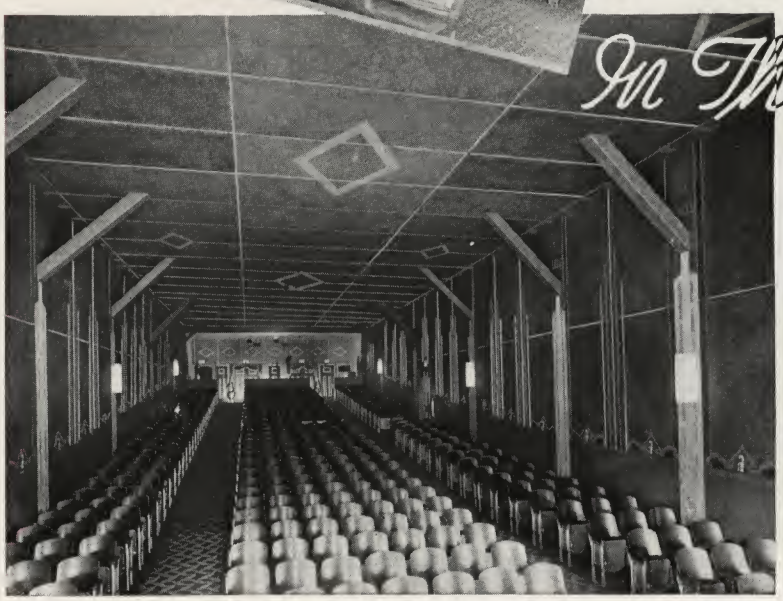
In Clubs

THIS MASONITE installation in the Taylor Hose Club, Meadville, Pennsylvania, is typical of the virility and character of Masonite Insulation in interior finish. The ceiling is left in its natural state, and the sidewalls are enriched with metal strips. The sound absorbing property of Masonite Insulation tones down that too often encountered and always irritating clatter of dishes. The lower walls are of Presdwood, and hence are capable of standing severe bumps and bruises.



In Churches

THE DIGNITY and restraint of Masonite Insulation, beveled and V-grooved is illustrated in this interior of the Parsons Primitive Church, Wilkes Barre, Pennsylvania. The two-tone effect is achieved by sandpapering. It is interesting to know that this entire installation was made by volunteer labor, all of it unskilled, so simple is the work of installing Masonite. Such walls stand the test of time. They will not crack, chip or buckle.



In Theatres

THE REX Theatre, Reading, Pennsylvania, illustrates how the smooth, pleasingly figured surfaces of Masonite can be delightfully dressed up with beveled designs. The ceiling and side walls above the wainscot are of Masonite Insulation, beveled and V-grooved and treated with colored designs. The wainscot and pilasters are of DeLuxe QuartR-board decorated with modish flutings. In such interiors, audiences enjoy sound pictures to the utmost. Such interiors, too, will not easily mar with wear, or crack, chip or warp.

In Restaurants



THE ESSENTIAL of a wall surface in a restaurant is that it BE clean, and LOOK clean. Masonite Temprtile is easy to keep clean, and always looks clean. It is low in cost, hence is popularly used in restaurants from coast to coast. At right is a typical installation, the interior of Messinger's Restaurant, Van Buren Street, Chicago. No trick to keep these glistening surfaces immaculate! And these walls will endure for years. They will not crack or chip. They're made to last!

In Expositions



PRESDWOOD, "the wonder wood of a thousand uses" comes into its own in making ultra-modern displays in expositions. An example is the Sherwin-Williams booth at the right. Presdwood is easily adaptable to any purpose requiring a smooth, strong material, that can be nailed, sawn, bent and glued and that will take paints perfectly. Presdwood is light yet tough. It is easily workable into unusually striking effects.

In Summer Cottages



THE ECONOMY, ease of installation, attractive appearance, moisture-resistant qualities and durability of Masonite leads to its widespread use for constructing lodges and summer cottages. At right is the living room of the summer lodge of a DuPont Company executive, situated at Pocono Preserve, Pocono Lake, Pennsylvania. Masonite Insulation with horizontal V-grooves is used throughout as upper side-walls and ceiling. The effect is one of pleasing texture contrast with the pine paneling on the lower walls.





Presdwood for Durable Exteriors

THE STORY of Presdwood is not yet finished! Besides all its other uses, Presdwood is coming into vogue for home and store exteriors. Because it is moisture-resistant, and will stand heat and cold, it remains durable in all kinds of weather.

The photographs on this page show two examples of such exterior use. That above is Mrs. Stover's candy shop in Kansas City, Missouri. The exterior as well as the interior is of Tempered Presdwood. The picture in the circle illustrates the front of the Rettig's Ice Cream Store, Houston, Texas. On both buildings sparkling metal strips give a modern distinctive touch to the clean, white surfaces.

The home pictured on page nine is an outstanding example of Presdwood for residential exteriors.

Hundreds of homes, stores, shops, tourist cabins, sandwich stands, service stations and refreshment booths are made of Tempered Presdwood, because it defies atmospheric conditions, is moisture-resistant, and durable. It can be bent to make modern rounded effects.

A few of the many uses to which Masonite Tempered Presdwood is put, are:

HOME INTERIORS — SHELVES — HOME EXTERIORS
FLOOR COVERINGS — WINDOW DISPLAYS
CONCRETE FORMS — PARTITIONS — DELIVERY CHUTES
PING-PONG TABLES — KITCHEN CABINETS
OFFICE LOCKERS — TOYS — STORE COUNTERS
BREAD BOARDS — BOOTH DISPLAYS
BILLBOARDS — TRAILERS — GARAGES
VENTILATORS
WAYSIDE SHOPS — BINS — TOPS FOR TABLES

FIVE STARS OF THE HOME BUILDING FIELD

Beauty, Utility, Durability at Low Cost

★ **MASONITE INSULATION:** Masonite Structural Insulation is like the other Masonite made products, all wood. It comes 4 feet wide and up to 12 feet in length, for wall sheathing, interior finish and sound deadening. It is moisture-resistant, heat-resistant, and sound-resistant. Can be easily beveled with any design, and by sandpapering a smart two-tone effect in brown can be achieved. A companion product, Masonite Insulating Lath, comes 2 feet by 4 feet, holds plaster with a firm grip and provides a thoroughly dependable plaster base.

★ **MASONITE QUARTRBOARD:** Both Masonite QuartRboard and Masonite Deluxe QuartRboard are semi-hard boards that make possible attractive interior panelings in their natural, rich brown color, or they can be sized and painted any hue. Especially popular when used on walls, painted in lovely tints, and beveled in modern designs, or combined with metal bands. Genuine Masonite QuartRboard, when properly installed, will not chip, crack or warp.

★ **MASONITE PRESDWOOD:** Masonite Presdwood and Tempered Presdwood combine the beauty of wood with permanence and rugged strength. It has been called "the wonder wood of a thousand uses." Because it is knotless, grainless, and splinterless it is especially adaptable for sidewalls and wainscots, for table tops, counters, and exteriors. It defies heat and cold, and is moisture-resistant. Properly applied it will not chip, crack, or warp, and can be painted any color. Like the other Masonite boards it can be sawed, nailed or glued.

★ **MASONITE TEMPRTILE:** A hard, tough board scored into four inch squares that will do wonders to the appearance of your kitchen or bathroom. It lends itself to enchanting color schemes for it takes colors perfectly. Properly installed it will not crack, chip or buckle. Easy to keep clean. Economical to install.

★ **CENTURY OF PROGRESS FLOORING:** For laying over wood floors only and for certain floor areas, nothing compares with Masonite Tempered Presdwood Century of Progress Flooring. This floor is handsome, durable and lower in price than any flooring comparable to it in quality and appearance.



MASONITE CORPORATION

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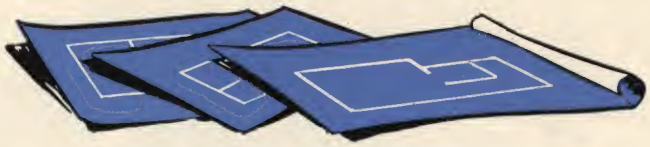


MINNEAPOLIS-HONEYWELL CONTROL SYSTEMS

For Heating, Ventilating and Air Conditioning

M I N N E A P O L I S -

SO YOU'RE GOING TO BUILD A HOUSE



Of course you are planning to install Automatic Heating and Air Conditioning in some form or other in your new home, but have you given Automatic Controls the consideration they deserve? Automatic Control makes Automatic Heating and Air Conditioning possible. Without Automatic Control neither could exist.

- On the following pages are described the functions of Automatic Controls as applied to various types of Automatic Heating and Air Conditioning equipment. This will enable you to determine the kind of control equipment necessary to accomplish the results desired.

- Minneapolis-Honeywell has nothing to sell directly to you, although it is the oldest and largest manufacturer of control equipment in the world. Minneapolis-Honeywell controls are sold to manufacturers and dealers, and are installed with your Automatic Heating and Air Conditioning equipment. Their importance cannot be too strongly stressed because Automatic Controls are responsible for the successful operation of the equipment you buy.

H O N E Y W E L L

AUTOMATIC CONTROLS

MH

MINNEAPOLIS

Install Automatic Heating



and Air Conditioning



BUT

don't overlook the controls that make it automatic

H O N E Y W E L L



M-H BASIC CONTROLS

BASIC AUTOMATIC HEATING CONTROLS

● Automatic heating can be accomplished only if the burner, regardless of the type of fuel used, is equipped with automatic controls. These controls should consist of a thermostat to stabilize room temperature, a limit control to restrict the temperature of the furnace or boiler at a given point, a primary control to operate the burner in the case of oil or coal firing, and a valve in the case of gas heating. Such controls, of course, are necessary for the operation of your burner and are required by most local ordinances. They represent the minimum equipment with which Automatic Heating can be properly installed.

Even if this minimum equipment is all that you require, insist upon Minneapolis-Honeywell Controls, for they insure the best performance from your system and make sure that proper controls will be available for future equipment if you make additions or changes later. Minneapolis-Honeywell Automatic Controls are accepted as standard by the majority of manufacturers, and are available for all types of oil, gas, or coal burners, as well as kindred equipment. The Minneapolis-Honeywell line is complete in itself.

In order to make list prices of Automatic Heating units attractive, most dealers supply only standard equipment, which includes a plain type thermostat such as the Acratherm. There are, however, several additional or optional controls you should know about. You probably will want more than the very minimum of controls, especially in view of the fact that complete automatic control will give much more comfort, convenience and economy, and will actually cost but little more.



THE ACRATHERM

MINNEAPOLIS-HONEYWELL

THE ACRATHERM • A REVOLUTIONARY ROOM TEMPERATURE CONTROL EMPLOYING THE APPROVED PRINCIPLE OF "HEAT ACCELERATION"

● Every automatic heating plant must have a thermostat, but only the M-H Acratherm will give you the perfection of temperature control you should have. It will probably cost you little, if any, more than a conventional type. The Acratherm is a new type of thermostat recently developed by Minneapolis-Honeywell engineers. It is the Minneapolis-Honeywell version of a plain type thermostat, yet has many distinct and revolutionary advantages. Because the greater majority of burners are supplied with M-H Controls, the chances are your dealer will figure the Acratherm in his original price. If some other plain type thermostat is substituted, the following facts will show you why it is wise to insist upon the Acratherm or one of the other Minneapolis-Honeywell Thermostats employing the Acratherm principle.

The Acratherm does what other thermostats strive to do; it provides stabilized heat. By means of its "accelerator", it actually senses temperature changes before they occur and speeds up the heating system to meet them. It literally irons out temperature fluctuations in any modern heating system by automatically adjusting the length and number of burner operations to supply heat in response to the changes in outside weather. Short frequent burner operations in cold weather, and less frequent operations in mild weather, produce stabilized heat. No thermostat without the Acratherm "Accelerator" can do this.

The Acratherm also eliminates the condition known to heating engineers as "Cold 70" which is due to air stratification as a result of intermittent firing. When heat is not supplied constantly enough to cause circulation within the room, there is a tendency for warm air to rise to the ceiling and cold air to settle on the floor, and even though the ordinary room thermostat is satisfied, a chilly feeling prevails. But the Acratherm, because it provides short frequent burner operations, keeps the air within the room circulating and temperatures even at all times.

When you install Automatic Heating insist that it is Acratherm controlled, as the Acratherm is probably Minneapolis-Honeywell's greatest single contribution to the automatic heating industry.



CLOCK CONTROLS

MINNEAPOLIS-HONEYWELL

LOWERED NIGHT TEMPERATURE AND FUEL ECONOMY

● It is an established fact that reducing temperature at night and during periods when heat is not needed, can save you from 10 to 30% in fuel costs. To make this lowering of temperature practical, Minneapolis-Honeywell originated and pioneered "Clock Control". It has been proved through exhaustive tests that fuel is saved at the rate of 3.2% per degree of lowered temperature . . . in other words — if your temperature control point is lowered 10° during the night or when temperature at the higher point is not needed, 32% of the fuel normally consumed during those hours will be saved. Lowered night temperature can be automatically accomplished at small cost to you. The M-H Chronotherm or the Da-Nite Acratherm provides "stabilized heat" as does the plain Acratherm, but offers, the additional advantages of lowered night temperature.

THE CHRONOTHERM

● The Minneapolis-Honeywell Chronotherm is the finest thermostat in the Minneapolis-Honeywell line, and is the ace of all thermostats. In addition to providing the same Stabilized Heat as the Acratherm, it is equipped with an accurate and dependable, self-starting, electric clock. It automatically lowers temperature at night and raises the temperature in the morning at any given time before you arise. The Chronotherm is completely automatic. Its added cost is more than compensated for, by the comfort and economy it provides. In fact, you can't afford to be without the Chronotherm in your home.

THE DA-NITE ACRATHERM

● The Da-Nite Acratherm provides the same exclusive control qualities as the plain Acratherm and the Chronotherm, but requires manual attention to provide night temperature shut-down. It is a less expensive way to accomplish lowered night temperature. At night when you retire or at any time when heat is not needed — if you are away for the day — a twist of the fingers reduces the temperature to a fuel saving level for the length of time you designate. When this period has elapsed, the Da-Nite Acratherm automatically restores the comfortable temperature you desire. This means that your home is always comfortable in the morning when you arise, yet you have saved fuel at the rate of 3.2% for every degree you have lowered the temperature at night or during your absence.

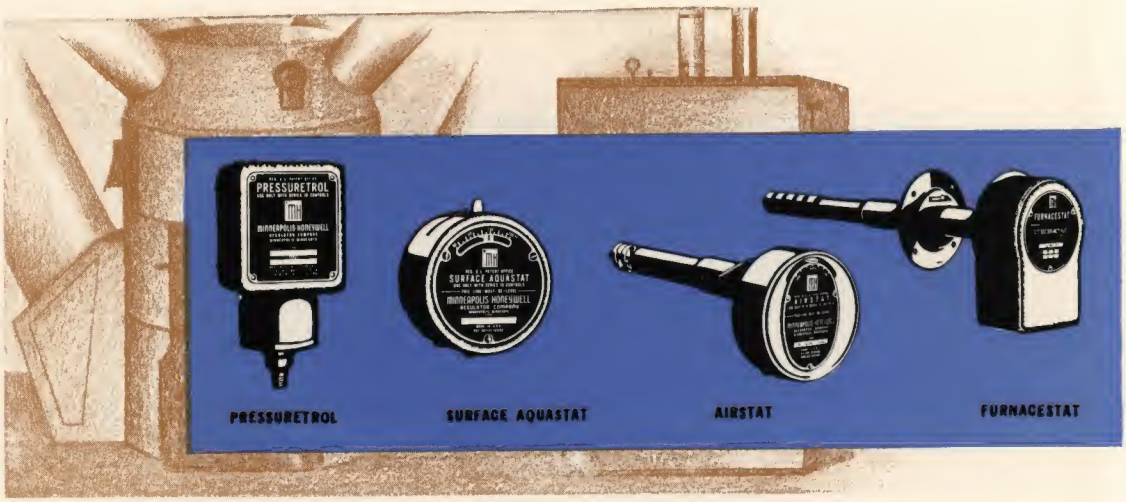
FURNACE AND BOILER LIMIT CONTROLS

● Limit controls safeguard the furnace or boiler against excessive temperatures or pressures. It is not uncommon for doors or windows to be left open, causing the thermostat to continually call for heat with the result that the heating plant itself becomes overheated. Limit controls are required by law in a great many localities and their cost is almost negligible.

The Airstat, for warm air systems, automatically shuts off the burner in the event the temperature of the furnace becomes too high. The Aquastat performs the same function for hot water systems, while the Pressuretrol and Vaporstat provide this protection for vapor and steam systems.

AUTOMATIC BLOWER CONTROL FOR WARM AIR SYSTEMS

● The blower or booster fan increases circulation and also speeds up the delivery of heat in warm air heating plants. Minneapolis-Honeywell Automatic Controls operate the blower or fan in any sequence desired. During summer months the blower can be used to circulate air through the basement, providing a cooling effect. Used at night, the fan or blower empties the house of warm air and draws in cool fresh air from the outside. All of this can be accomplished automatically by the installation of Minneapolis-Honeywell Controls.

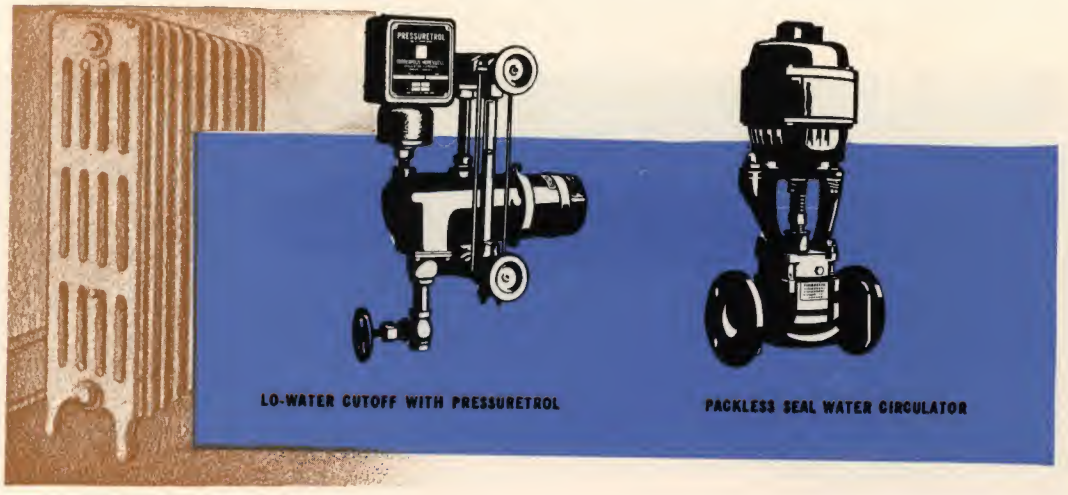


THE LO-WATER CUTOFF — FOR STEAM OR VAPOR SYSTEMS

● Considerable damage can result to a steam or vapor system in the event the water level in the boiler becomes too low, either through neglect or because of an unnoticed leak. The M-H Lo-Water Cutoff automatically turns off the burner which remains off until a safe water level in the boiler is restored. No steam or vapor heated home should be without this protection, for lack of it may involve damage to property, or injury to the occupants. An M-H Lo-Water Cutoff can easily be added to any installation at a very nominal cost.

FORCED HOT WATER CIRCULATION

● Forced circulation of hot water in hot water systems is the modern and efficient way to insure quick, even heat. Without proper circulation, remote radiators naturally do not deliver heat as quickly as those nearer the heating system. The Minneapolis-Honeywell electrically operated Water Circulator automatically forces hot water throughout the system providing even distribution of heat to all parts of the home. Because the circulation is much more rapid with the circulator than with natural or gravity circulation, the temperature of the boiler water may be maintained at a lower level. The precision built M-H Packless Seal Circulator is leak-proof and extremely quiet. Its oil reservoir provides scientific lubrication and insures trouble-free operation.

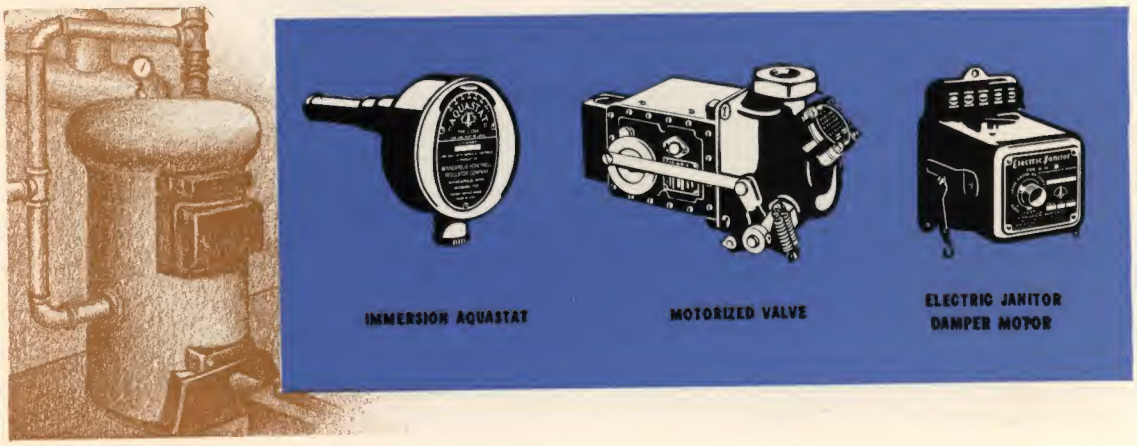


DOMESTIC HOT WATER FROM YOUR AUTOMATIC BURNER

● The Automatic Burner used to heat your home can also furnish a plentiful supply of low cost hot water during the summer as well as winter. When heat is not needed to maintain comfortable temperatures throughout the house, the radiator lines are automatically shut off and heat is transmitted to an indirect water heater. In a steam system, only an indirect water heater and a low limit control (Aquastat) are required. With a hot water heating system, the indirect heater is used, as well as the low limit Aquastat — and in addition a water circulator, discussed on the previous page, and flow valves are used to prevent heat travel to the rooms during the summer.

AUTOMATIC CONTROL OF HAND FIRED HEATING PLANTS

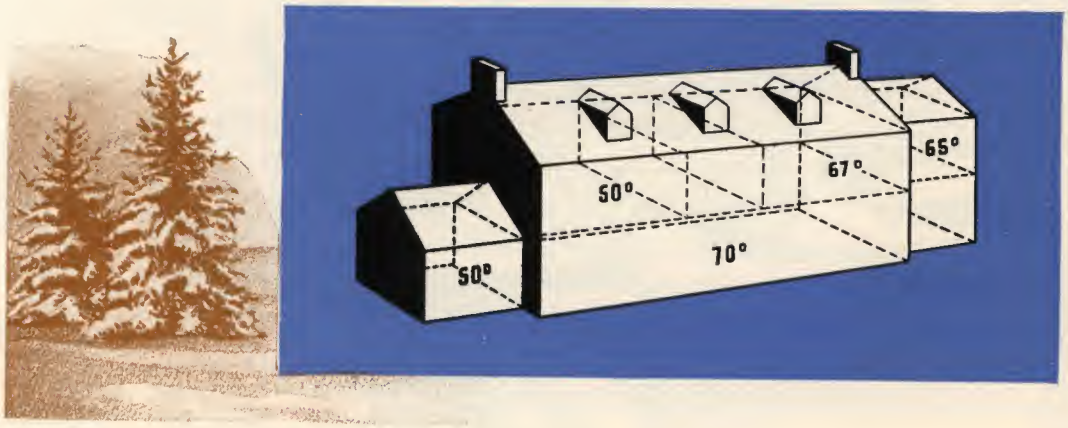
● The simplest form of control is the automatic damper regulator for a manually fired heating plant. The M-H Electric Janitor consists of a room thermostat and an electric motor which opens and closes the furnace or boiler drafts in accordance with the room temperature requirements. A limit control should always be used. This not only provides healthful and comfortable temperatures but eliminates fuel waste due to overheating, which often occurs when the heating plant is manually regulated.



ZONE CONTROL FOR LARGE HOMES

● If you are building a large home, with servant quarters, guest rooms, garage, and other sections which do not constantly require the same temperature as the living quarters, or a home in which certain sections are differently affected by their exposure to the sun and wind, consideration of automatic control of the individual zones is highly important. The living rooms of your home should be kept at 70 or 72 degrees, while the temperature in the garage need not be more than just above freezing. Servants' quarters and guest rooms should be kept cool during the hours when they are not being used.

The effects of the sun and wind also must be taken into consideration. Rooms most exposed to wind must be supplied with more heat, while rooms which receive the benefit of solar radiation should be given less heat if uniform temperatures are to be maintained. To accomplish such results, the heating system should be divided into sections and controlled under a system known as Zone Control, which takes all heating factors into account and distributes heat accordingly. The economies that are effected will more than pay the cost of a Zone Control System, in a comparatively short time.





AIR CONDITIONING IS NOT NEW

Early device to ventilate a room by a mechanically operated fan . . . Engraving after Boeckler, 1659

AIR CONDITIONING

● Probably no individual subject in the building field is more widely discussed and yet less understood than Air Conditioning. This is true because of the vast difference in opinion as to what Air Conditioning actually is.



In reality Air Conditioning, or to be explicit, year 'round Air Conditioning, consists of six important factors, namely: Heating, Cooling, Humidifying, Dehumidifying, Circulating and Cleaning . . . all under Automatic Control.

Air Conditioning thus means much more than summer cooling and winter humidifying. It has long passed the luxury stage and is not only desirable but necessary, because it produces untold indoor comfort throughout the year, and is a vital factor in maintaining health and comfort as well as keeping furnishings and buildings in good condition. And, as is the case with Automatic Heating, true Air Conditioning cannot exist without Automatic Control.

It is not necessary, however, that complete year 'round Air Conditioning be installed at one time. This can be undertaken step by step. Additions can be made from time to time, but unless the control system for your equipment is such that you can obtain additional controls which will match up with your original installation, you will not have a coordinated system capable of producing the best results. In this respect Minneapolis-Honeywell can serve you to best advantage, because the Minneapolis-Honeywell line is complete in itself, and M-H controls are designed to work together.

The importance of Automatic Control cannot be too strongly emphasized. Properly applied, it insures the most satisfactory results that the conditioning system is capable of producing. It is, therefore, important that the possibilities of Air Conditioning and Automatic Control be broadly understood and considered when selecting various types of Air Conditioning equipment.

AIR CONDITIONING FUNCTIONS

● There are six functioning factors of an Air Conditioning system, namely: Heating, Cooling, Humidifying, Dehumidifying, Circulating and Cleaning.

1 Year 'round functions consist of circulating and cleaning the air.

2 Winter functions include heating and humidifying.

3 Summer functions are cooling and dehumidifying.

AUTOMATIC CONTROL

● Whether you install only Automatic Heating or add to it one or more of the other functions of Air Conditioning, the importance of the Automatic Controls cannot be too strongly emphasized. With adequate Automatic Control, the system, large or small, can be a comfort and joy; without adequate Automatic Control the system will likely be an annoyance and worry.

In general, Automatic Control in an Air Conditioning system does the following:

1 **ELIMINATES HUMAN ERROR:** Automatic Control provides adequate, accurate, and dependable regulation of the several factors and the various mechanical units which produce Air Conditioning. Controls will react to temperature and humidity changes long before the human body is aware of a change.

2 **REDUCES COST OF OPERATION:** When Air Conditioning is Automatically Controlled there is no waste of fuel or power. Overheating in winter and under-cooling in summer are avoided.

3 **PROVIDES SAFETY:** The steam or water pressure in a heating boiler, or the temperature of a warm air furnace must be controlled to safeguard the heating plant. The amount of moisture in the air must be governed to prevent damage. Dependable safeguard can be provided only by automatic safety controls which are a part of every Minneapolis-Honeywell Control System.

There is a Minneapolis-Honeywell Automatic Control for every Air Conditioning function, and for every type of equipment selected. Automatic Control is just as important as the Air Conditioning equipment itself, for without control, a system cannot function as efficiently, as economically, or as conveniently as it should.

AIR CONDITIONING AVAILABLE FOR EVERY HOME

● No matter what type of home you are planning to construct, and regardless of the type of heating system you select, there is an Air Conditioning System available to fit your plans. The type of system best suited for your individual home will depend, of course, upon the construction of the house, its location, and upon the type of heating plant you select.

Generally speaking, there are two types of Air Conditioning Systems. The first is a warm air system, the second, a split system which utilizes a steam or hot water boiler to heat the air. In each instance the air is circulated throughout the house by a centrally located fan and suitable distribution ducts. There are also available, unit conditioners, which may be installed in one or more sections of the home.

AIR CONDITIONING NEED NOT BE COSTLY

● Naturally, one of the first questions which will come to your mind is how much will an Air Conditioning System cost, and will it be expensive to operate?

There is no way for making a blanket estimate. Installation cost depends entirely upon the type and size of the home and the degree to which true air conditioning is undertaken.

In any event, it is well to point out that Air Conditioning need not be a costly undertaking. Conditioning can be accomplished step by step. Some of the factors can be incorporated in the original heating system, and the remaining factors added from time to time as the need arises or as finances permit.



Operating costs, of course, vary in proportion to the size of your home and its geographic location. Complete Automatic Control will, of course, materially reduce operating costs. Automatic Control will keep your home warm enough but never too warm — cool enough but never too cool — moist enough but never too moist. Therefore there is no waste, and waste is always costly.

The construction of your home will play an important part in the operating cost of an Air Conditioning System. Insulation, doors and windows, shades and awnings will make a tremendous difference in the cost of both winter and summer conditioning.

PLAN AIR CONDITIONING STEP BY STEP

● In all homes there are often several ways of accomplishing the same final results from Air Conditioning. But whether you plan to make the complete installation when you build or to provide Air Conditioning step by step, it is necessary that definite plans be made at the outset. Too much stress therefore cannot be placed on the value of employing a competent Architect or Engineer who can properly plan your entire system. Provision must be made for ducts to circulate conditioned air; the plant itself must be properly located, and many other elements must be taken into consideration that require the services of an Architect or Engineer.

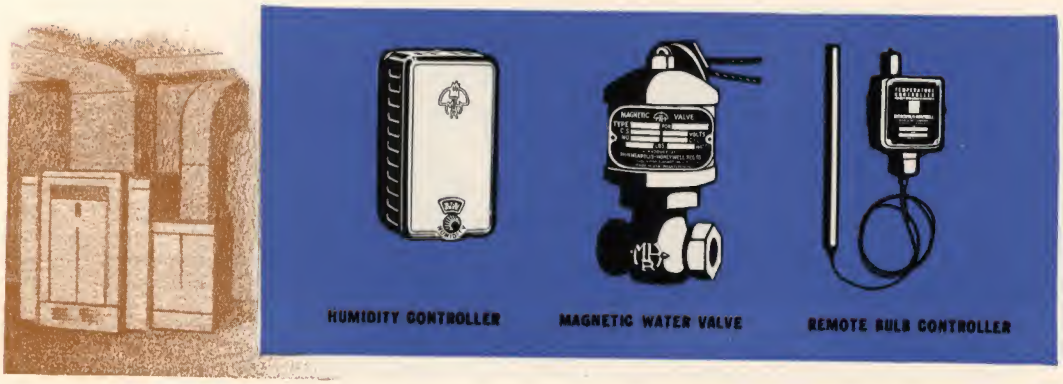
The selection of the proper basic control system is likewise of utmost importance. It is necessary that the control system be such, that whether it is installed at one time, or step by step, it shall be completely coordinated and will function as a unit. Minneapolis-Honeywell is the only manufacturer offering a complete line — the right control for every application. When you start with Minneapolis-Honeywell Controls you have complete assurance that other necessary controls can be added from time to time, so that as you install additional Air Conditioning equipment, the entire control system will work together in perfect harmony.

HEATING: Heating is probably the most necessary of all the six factors of Air Conditioning and is therefore the first step to True Air Conditioning. Your first consideration should be to determine whether the general type of heating system best suited for your home shall be warm air, hot water, steam or vapor. The type of fuel is the next consideration, and you have the choice between an oil burner, gas burner or coal burner to provide automatic heating. The geographic location of your home will often determine which type of fuel is best suited for your needs. This factor frequently influences operating costs.

HUMIDIFYING: The next step in Air Conditioning, from the standpoint of ease of installation as well as cost, is humidifying equipment. It is not much of a task to install an Air Conditioning System which automatically insures distribution of a sufficient amount of moisture at all times to maintain the proper degree of humidity

To control humidity, an automatic water valve is necessary. This valve is regulated by a humidity controller that opens and closes the valve as the need for moisture becomes apparent. Unless humidification is automatically controlled, there is danger of excessive moisture, which not only can cause windows to frost but can also cause material damage to furnishings, walls, and other parts of the home.

CIRCULATING: Regardless of the type of heating system employed, suitable means must be provided to circulate conditioned air throughout the home. When one central conditioning system is used, a blower or fan is installed in the basement and air is distributed throughout the various rooms. Automatic Controls will govern the sequence of this blower operation as required, depending upon the system. Provision should also be made for an automatic switch-over from the heating to the cooling cycle, so that at the change of seasons, or in those climates subject to sharp and extreme changes in temperature, no manual attention will be required. The heating or cooling equipment, the humidifying apparatus, and blower or fan should be coordinated to meet these changing requirements as they occur.



CLEANING: It is a simple matter to install Air Cleaning equipment. This usually consists of filters through which the air is drawn, thus removing dust particles and foreign matter. No controls are necessary for this operation, though the controls which govern circulation do indirectly control the cleaning.

COOLING: This is accomplished by putting into circulation air which has been artificially chilled by passing it over coils cooled with cold water, or by mechanical refrigeration, or by passing the air through a cold water spray, or over ice. The amount of time that the refrigeration compressor, or the water pump, should run must be automatically controlled to insure proper cooling at minimum cost.

DEHUMIDIFICATION: This involves the removal of moisture from the indoor air by either passing the air through a cold water spray, which, because it is cold, actually takes moisture out of the air, or over cold coils, upon which the moisture will gather, just as moisture will collect on the outside of a cold glass. This may also be done chemically by passing the air through a chemical solution, or bed of crystals, which absorbs the moisture. There is a close relationship between Cooling and Dehumidifying, and while Cooling may not necessarily include Dehumidifying, the latter usually has a cooling effect. Under proper Minneapolis-Honeywell control, the combined effect of these factors can be made to produce a most satisfactory condition at the lowest possible cost.

OPTIONAL AIR CONDITIONING EQUIPMENT

● When artificial cooling is not possible or not deemed necessary, considerable benefit can be derived through use of an attic fan. In the evening when outside temperatures fall, the attic fan expels the warm air from the house and fresh, cool air is drawn in through doors or windows left open on the ground floor.

This naturally has a distinct cooling effect, as it not only causes circulation but supplants warm air with the cooler outside air.

Automatic Control can operate an attic fan in several different ways. An M-H Time-O-Stat can automatically start the fan at a given hour and turn it off at any given time, or it can start the fan only when the temperature is above a given point in the home.

H O N E Y W E L L

WHY MINNEAPOLIS-HONEYWELL

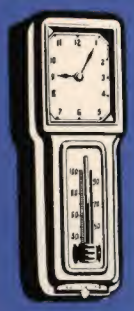
● Minneapolis-Honeywell is the oldest and largest manufacturer of automatic control equipment in the world. It has pioneered and developed every important contribution to this vast industry. Its products are backed by more than fifty years of actual field experience together with constant research and practical laboratory tests. Only Minneapolis-Honeywell can supply a complete Control System to meet every known requirement, be it a small or large home, a simple automatic heating job or a complete year 'round air conditioning installation. Branch offices are maintained in seventy principal cities to assure prompt service at all times. When you install Minneapolis-Honeywell Controls, you have definite assurance that your heating or air conditioning system will function at its best, both as regards performance and economical operation. Your heating or air conditioning Engineer and your Architect will heartily recommend and endorse Minneapolis-Honeywell Controls.



DEPENDABLE CONTROLS COST LESS THAN SERVICE

CONTROL REQUIREMENTS FOR AUTOMATIC BURNERS INCLUDE

ROOM THERMOSTAT



A

CHRONOTHERM—The world's finest thermostat. It is fully automatic, has a self-starting electric Telechron clock movement and offers all the advantages of lowered night temperature without manual attention throughout the entire heating season. Stabilized Heat is assured through the exclusive M-H principle of "Heat Acceleration".



B

DA-NITE ACRATHERM—This thermostat, like the Chronotherm, provides lowered night temperature but requires a manual setback each night before you retire. Day time temperature is then automatically restored at any time you desire. Stabilized Heat is maintained through its "accelerator" . . . an exclusive M-H feature.



C

THE ACRATHERM—This is the M-H plain type thermostat. It has "Heat Acceleration" and will definitely maintain stabilized temperature throughout your home, regardless of outside weather conditions. If you do not decide to have the Chronotherm or the Da-Nite Acratherm, insist upon having the M-H Acratherm.

OPERATING CONTROL



D

PROTECTORELAY—This is the recommended operating control for your automatic oil burner. It is actuated by the M-H room thermostat you select. M-H Protectorelays provide automatic shut down in the event of combustion failure, and provide a means for automatic recycling.



E

GAS VALVE—This is the silent solenoid M-H automatic gas valve for your automatic gas burner. Like the Protectorelay for the oil burner, this solenoid gas valve takes its control from the M-H "heat accelerated" room thermostat which you specify. Motorized Gas Valves also available.



F

TIMERELAY—Automatic coal burners are operated by either the M-H Timerelay or Stokerswitch which maintains the fire in mild weather and controls your burner with a maximum of economy. These instruments are controlled by the M-H room thermostat you select.

SAFETY CONTROL



G

AIRSTAT — A safety or limit control which protects your furnace from over-heating, by automatically shutting off your burner before the bonnet or stack temperature in your warm air heating plant becomes excessive, thereby offering complete safety of operation.



H

AQUASTAT — Should a window or door be left open, your thermostat may call for heat continually. Under these conditions an overheated boiler will undoubtedly result. The Aquastat measures boiler temperature and provides automatic shut down whenever safe limits are exceeded.



I

PRESSURETROL—This safety or limit control is a necessary part of every steam, vapor or vacuum automatic heating system. It may be used by itself to provide protection against high pressure or may be used in combination with the M-H Lo-Water Cutoff for Duplex switch operation.

CONTROL REQUIREMENTS FOR AIR CONDITIONING SYSTEMS INCLUDE

AUTOMATIC CONTROLS



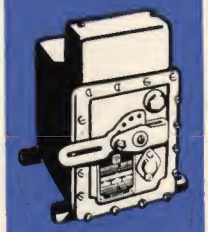
J

HUMIDITY CONTROL — This instrument has a human hair, hygroscopic element which will control, between predetermined limits, the relative humidity in your home. The importance of proper humidity cannot be overestimated and can be had only through automatic control.



K

WATER VALVE — These solenoid valves take their control from the Humidity Controller and are especially designed for domestic application. They are extremely silent — sturdily built — and are so constructed that the seat and plunger may be easily removed for cleaning.

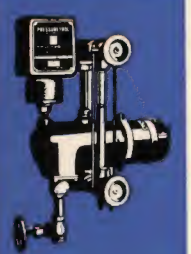


L

MODUTROL MOTOR — The Modutrol Motor is used to automatically operate valves or dampers which in turn control the flow of steam, water, or air. These motors are built in several types, both the two-position "on" and "off" type and the full modulating or proportioning type.

AUXILIARY AUTOMATIC CONTROLS YOU SHOULD CONSIDER

AUTOMATIC CONTROLS



M

LO-WATER CUTOFF — This safety control constantly watches the water level in your boiler and shuts off your automatic burner whenever the water level becomes too low for safety. Combined with the Pressuretrol, as illustrated, it is known as an M-H Duplex Switch.



N

WATER CIRCULATOR — The M-H Packless Seal Circulator should be considered for all hot water heating plants. It makes possible smaller size piping throughout your home and will actually reduce fuel costs. This Circulator is precision built and scientifically lubricated.



O

FLOW VALVE—Flow Valves are used in conjunction with the M-H Packless Seal Circulator to provide a completely automatic summer-winter domestic hot water system. Without the circulator, M-H Motorized Flow Valves and a low limit control provide the same function.

DAMPER CONTROLS FOR HAND FIRED, COAL BURNING HEATING PLANTS

AUTOMATIC CONTROLS



P

DAMPER MOTOR—This is the small but efficient, electrically operated, damper motor supplied with the Electric Janitor Control Packages. It takes its Control from your room thermostat, which may be either the Chronotherm, Da-Nite Acratherm or the plain type Acratherm.

ELECTRIC JANITOR CONTROLS — For the hand-fired heating plant, automatic controls offer economy of operation as well as convenience. These controls are supplied in complete package outfits including the sturdy, fully electric, damper motor (illustrated) together with transformer and all necessary fittings. The room thermostat supplied may be either the Chronotherm (**A**), Da-Nite Acratherm (**B**) or the plain type Acratherm (**C**), all illustrated above. Don't be without Electric Janitor Automatic Controls even though you do not install an automatic burner. Automatic Controls are indispensable in any home, regardless of the type of heating equipment selected.

- One of the Blocks Below Will Fit Your Requirements.
- Study the Opposite Page. ✓ Check the Controls Below That You Want Specified.
- Insist on M-H Controls Throughout Your Home . . Your Architect Will Recommend M-H.
- CONTROLS IDENTIFIED BY STARS (☆) ARE THE RECOMMENDED INSTRUMENTS YOU SHOULD HAVE.

CHECK YOUR REQUIREMENTS . . . TEAR OUT THIS PAGE FOR YOUR ARCHITECT OR HEATING CONTRACTOR

WARM AIR HEATING PLANT

FOR AUTOMATIC OIL BURNER

ROOM THERMOSTAT
☆ Chronotherm.....A ☐
Da-Nite Acratherm.....B ☐
Acratherm.....C ☐

OPERATING CONTROL
☆ M-H Protectorelay.....D ☐

BLOWER OR FAN CONTROL
☆ M-H Furnacestat..... ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System.... ☐

FOR AUTOMATIC GAS BURNER

ROOM THERMOSTAT
☆ Chronotherm.....A ☐
Da-Nite Acratherm.....B ☐
Acratherm.....C ☐

OPERATING CONTROL
☆ M-H Gas Valve.....E ☐

SAFETY CONTROL
☆ M-H Airstat.....G ☐
☆ M-H Pilotstat..... ☐

BLOWER OR FAN CONTROL
☆ M-H Furnacestat..... ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System.... ☐

FOR AUTOMATIC COAL BURNER (STOKER)

ROOM THERMOSTAT
☆ Chronotherm.....A ☐
Da-Nite Acratherm.....B ☐
Acratherm.....C ☐

OPERATING CONTROL
☆ M-H Timerelay or Stokerswitch.F ☐

SAFETY CONTROL
☆ M-H Airstat.....G ☐

BLOWER OR FAN CONTROL
☆ M-H Furnacestat..... ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System..... ☐

HOT WATER SYSTEM

ROOM THERMOSTAT
☆ Chronotherm.....A ☐
Da-Nite Acratherm.....B ☐
Acratherm.....C ☐

OPERATING CONTROL
☆ M-H Protectorelay.....D ☐

SAFETY CONTROL
☆ M-H Aquastat.....H ☐

AUXILIARY CONTROLS
☆ M-H Water Circulator....N ☐
☆ M-H Summer-Winter Controls for year 'round hot water..... ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System.... ☐

ROOM THERMOSTAT
☆ Chronotherm.....A ☐
Da-Nite Acratherm.....B ☐
Acratherm.....C ☐

OPERATING CONTROL
☆ M-H Gas Valve.....E ☐

SAFETY CONTROL
☆ M-H Aquastat.....H ☐
☆ M-H Pilotstat..... ☐

AUXILIARY CONTROLS
☆ M-H Water Circulator....N ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System.... ☐

ROOM THERMOSTAT
☆ Chronotherm.....A ☐
Da-Nite Acratherm.....B ☐
Acratherm.....C ☐

OPERATING CONTROL
☆ M-H Timerelay or Stokerswitch.F ☐

SAFETY CONTROL
☆ M-H Aquastat.....H ☐

AUXILIARY CONTROLS
☆ M-H Water Circulator.....N ☐
☆ M-H Summer-Winter Controls for year 'round hot water..... ☐

AIR CONITIONING CONTROLS
☆ M-H Standard System..... ☐

STEAM OR VAPOR SYSTEM

ROOM THERMOSTAT
☆ Chronotherm.....A ☐
Da-Nite Acratherm.....B ☐
Acratherm.....C ☐

OPERATING CONTROL
☆ M-H Protectorelay.....D ☐

SAFETY CONTROL
☆ M-H Pressuretrol..... I ☐
☆ M-H Lo-Water Cutoff.....M ☐

AUXILIARY CONTROLS
☆ M-H Summer-Winter Controls for year 'round hot water..... ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System.... ☐

ROOM THERMOSTAT
☆ Chronotherm.....A ☐
Da-Nite Acratherm.....B ☐
Acratherm.....C ☐

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AUXILIARY CONTROLS
☆ M-H Summer-Winter Controls for year 'round hot water..... ☐

AIR CONDITIONING CONTROLS
☆ M-H Standard System..... ☐

AIR CONDITIONING CONTROLS DEPEND UPON THE TYPE AND COMPLETENESS OF THE SYSTEM YOU SELECT

ALL SYSTEMS

- Humidity Control is of vital importance. For health and comfort, Relative Humidity must be maintained within predetermined limits during both summer and winter seasons.

☆ Humidity Controller (J) and Water Valve (K)...☐

- Summer-Winter Automatic Change-Over is indispensable in a year 'round system. Automatic reversal of the control action from the heating to the cooling cycle in response to changes in outside weather assures comfort and economy of operation.

☆ M-H Summer-Winter Automatic Change-Over...☐

- Duct Temperature Controllers are often necessary when it is impossible to find a desirable location for a standard room thermostat.

☆ Minneapolis-Honeywell remote bulb modulating or two position controllers.....☐

- If Zone Control is contemplated, use Modutrol motored valves and dampers with proper thermostats or temperature controllers.

☆ Minneapolis-Honeywell Modulating Thermostats and Modutrol Motors (L).....☐

FOR HAND-FIRED HEATING PLANTS — ☆ Use M-H Electric Janitor Controls..P ☐

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Milwaukee

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H O N E Y W E L L



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MINNEAPOLIS-HONEYWELL REGULATOR COMPANY

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For Heating, Ventilating and Air Conditioning



To Keep Your Home Snug and Tight

Wrap it in—

SISALKRAFT

"Better Building Paper"

—IT COSTS SO LITTLE AND DOES SO MUCH

TEST SAMPLE ON INSIDE BACK COVER



See why Sisalkraft is
TOUGH—WATERPROOF—WINDPROOF
Test sample on back cover

BUILDING PAPER

wraps up the most valuable purchase of a lifetime---your home and everything you put into it.

The best plans—the finest materials—the most careful workmanship—may prove to be an expensive disappointment IF YOU THINK BUILDING PAPER IS UNIMPORTANT!

HERE IS WHAT GOOD BUILDING PAPER DOES

It doesn't matter what kind of exterior you plan for your home—it will allow a certain amount of air and moisture infiltration. Clapboards and shingles, or any lumber, absorb moisture and shrink, leaving cracks—stucco and brick are porous—and the joints between brick or stone work open. Without good building paper protection, rain and wind will cause damage and discomfort whenever it gets through the outside covering of your home.

It is the important job of good building paper to form a second "shell"—a protective barrier against wind—moisture—and dirt.

Good building paper must stop the wind that causes drafty, cold homes—and it must stop rain from penetrating the roof and walls, causing damage, discomfort and reducing insulation efficiency. Where air conditioning is planned, it is used as a moisture barrier to prevent the outward movement of vapor which causes sidewall deterioration, and reduces insulation value. Good building paper keeps wind and water out—and when desired, keeps moisture in.

To do its work efficiently—to protect your investment—to help safeguard your health—building paper must be a waterproof, airproof sheet with a minimum of expansion or contraction, and tough enough to be applied without holes, or tears of any kind.

AND SISALKRAFT COSTS SO LITTLE

Sidewall protection in a $7500 home costs only from $15 to $25—subtract from that amount the cost of an ordinary paper (which you might use IF YOU DIDN'T KNOW BUILDING PAPER WAS IMPORTANT). Thus, the cost of Sisalkraft is but a few cents per year—over the lifetime of your home. Think of what that few cents buys—lowered maintenance cost—decreased depreciation—fuel economy—health and comfort.

"SISALKRAFT IS THE PERFECT BUILDING PAPER"

Copyright 1938. The Sisalkraft Co. Printed in U.S.A.

WHY SISALKRAFT KEEPS A HOUSE SNUG AND TIGHT

Sisalkraft is pre-treated — which means that its tough cover sheets are especially treated before combining, to resist shrinkage and fungus rot. This is standard in all 36" rolls. This exclusive feature is typical of the careful manufacture — soundness of recommended uses — and constant effort toward improvement — of Sisalkraft.

IT'S STRONG AND TOUGH!

Sisal fibres like paper, won't stretch—string and other reenforcements stretch when pulled and the paper breaks before the reenforcement takes the strain. There is over a half mile (approximately 2808 lineal feet) of steel-like sisal fibres, running both lengthwise and crosswise, in every square yard of Sisalkraft. That's why it can take the abuse which building paper gets—rough handling, dragged around, walked on.

Sisalkraft doesn't tear, rip or puncture like the flimsy papers—which often are torn and cracked before they are put in place. Wind and moisture penetrate even very small openings in a building paper. Sisalkraft applies quickly, easily, without waste and no battens are necessary. The fibres in Sisalkraft are so closely spaced that no matter where a nail is driven through it, they give absolute resistance to movement in any direction.

IT'S WATERPROOF AND AIRTIGHT!

Even Noah recognized asphalt as ideal for waterproofing—he used it in the ark. And it is equally impermeable to air—when an unbroken film is maintained. The asphalt in Sisalkraft is constantly studied and checked in our laboratory—it won't run in hot weather or crack in cold. A generous quantity of this special asphalt is uniformly applied to both cover sheets. In the combining process (heat and pressure) the tough sisal fibres are embedded in, and completely surrounded by asphalt. Sisalkraft is really composed of six plies—two of asphalt—two of sisal—and two of pre-treated kraft. When combined they become a single, tough, water and airproof sheet.

IT'S TIME-TESTED AND PROVEN!

The quality of Sisalkraft is demonstrated by hundreds of thousands of installations—over a long period of years. This "Better Building Paper" has proved itself to be the dependable, economical protector of houses against the weather. Accept no substitute!

Suggest Sisalkraft to your Architect and Contractor

THEY WILL RECOMMEND IT HIGHLY



See why Sisalkraft is
TOUGH—WATERPROOF—WINDPROOF
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SISALKRAFT

in walls, under flooring and beneath roofing

IN ANY TYPE WALL

Sisalkraft protection is needed in sidewalls—whether they be wood siding, shingle, stucco, brick or stone veneer. Wind and rain will penetrate any of these materials—that's why it is so important to wrap up your home beneath its outer shell—so necessary to cover all sheathing with wind- and waterproof Sisalkraft.

Corner posts, and window and door openings are vulnerable points—protect them well. Sisalkraft is more than strong enough to be pulled around corners and turned into all door and window openings. It goes into place intact—fast rough handling, or whipping winds won't hurt Sisalkraft.

The dead air cells in insulation are what make it effective—they must be protected from moisture, and wind infiltration or their efficiency is greatly reduced. Sisalkraft is waterproof and airtight!

UNDER FLOORING

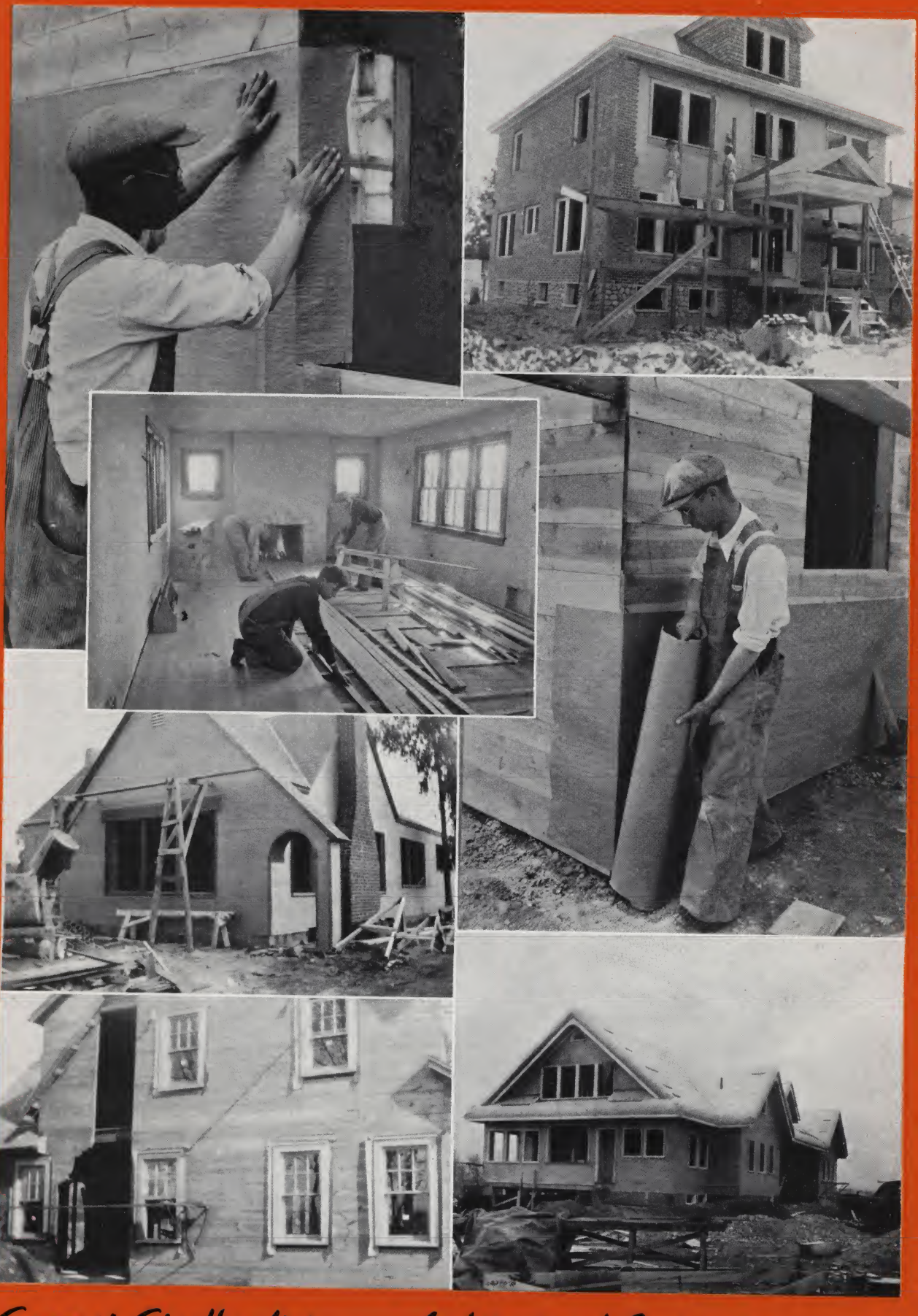
Sisalkraft under flooring prevents moisture and dust rising upstairs from the basement, keeping your flooring clean and dry. This is important protection because cupping, warping and creaking in hardwood floors are commonly caused by moisture absorbed from below.

The toughness of Sisalkraft enables it to be applied without breaking, and without damage from men walking upon it, insuring an unbroken waterproof membrane between subfloor and finished floor. In floor lining, Sisalkraft should be turned up under the baseboards—as an added protection against drafts and moisture.

UNDER ROOFING

Sisalkraft is a dry sheet—not roofing. It stops water that is forced under shingles by a high wind; that leaks through a damaged roof; or that backs up from melting snow and ice in gutters and valleys. It also stops a lot of air from leaking out of the attic.

When a nail is driven through Sisalkraft the asphalt core is penetrated. If this asphalt were dry and brittle the resulting hole would permit leaks. But since the asphalt in Sisalkraft is of a special tacky composition, and since it is protected against oxidizing by cover sheets, it hugs or clings tightly to the shank of the nail and seals the hole.



Suggest Sisalkraft to your Architect and Contractor

THEY WILL RECOMMEND IT HIGHLY

See why Sisalkraft is
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Test sample on back cover

SISALKRAFT

FOR CURING AND PROTECTING CONCRETE

Clean, dustless, beautiful concrete is very important for the basement. It means a livable, attractive floor, free from fine dust, and easy to clean. Walks, driveways, steps, garage floors, etc., also are important to the appearance of every home. To have strength, texture, and beauty in all of your concrete, you must have proper curing. Without it, the best materials and the most careful workmanship, will not produce good concrete.

Concrete may be strong, comparatively speaking, but if it is improperly cured it will wear, crack, and dust. The continued sweeping away from an improperly cured floor of what looks like dust and dirt, is more often the uncombined fine cement of the concrete surface. This leaves a pitted and uneven finish which continually becomes worse. THAT'S WHY SISALKRAFT CURING IS SO IMPORTANT.

Curing is the chemical change necessary for water, cement, and gravel to combine. It is accomplished by sealing in with Sisalkraft the original mixing water in the concrete until the chemical change is complete.

Today, the basement is used almost as much as the living rooms and therefore it is important that the concrete floors be kept free from construction stains, dirt, and debris. Sisalkraft cures the concrete and at the same time keeps the floor clean—it can be left in place until all work is finished and the house is ready for occupancy.

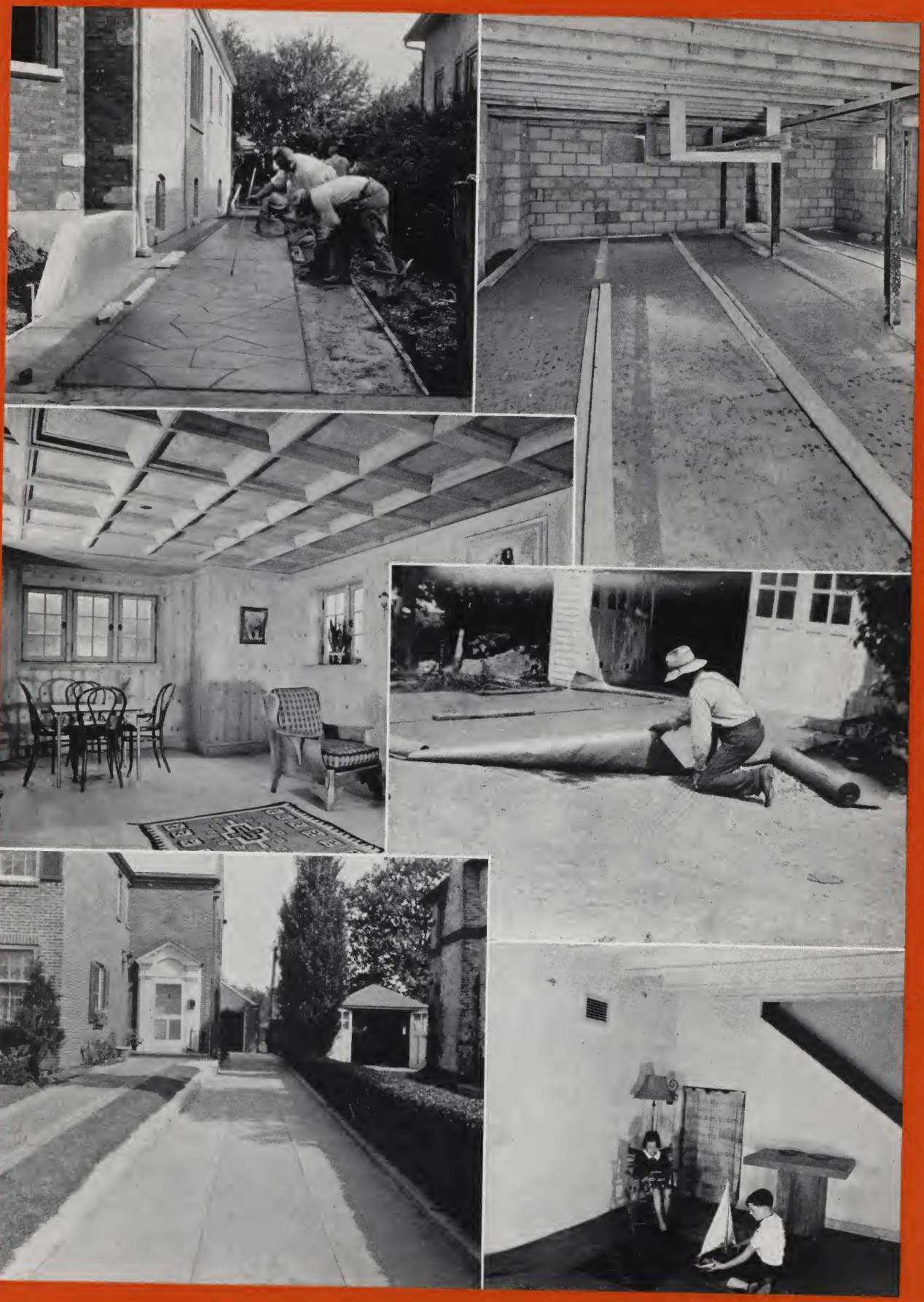
An average size basement floor can be cured with Sisalkraft for as little as $8.00. And the same paper can be used for curing the driveway, walks, and garage floor. Thus, the cost of Sisalkraft curing is negligible. For further data write for folder B-721-H.

This concrete block was cured with Sisalkraft. It has undergone a severe sand blasting test with practically no damage. The strength, beauty and density of this kind of concrete can easily be recognized. This clearly illustrates the way Sisalkraft-cured concrete resists wear in actual service.





Here is shown concrete out of exactly the same mix as that pictured at the left, the only difference being that it had no protection from rapid drying. Note how badly the same sand-blasting damaged the surface. That's what happens under ordinary wear when concrete is not cured properly.



Suggest Sisalkraft to your Architect and Contractor

THEY WILL RECOMMEND IT HIGHLY

See why Sisalkraft is
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Test sample on back cover

SISALKRAFT

protection for home -- industry -- farm

What, Silos of Paper?—certainly! Over 150,000 of them—made of Sisalkraft and corn cribbing — have been used by farmers. See picture on opposite page.

Paper tough enough to serve as a silo, is NOT ORDINARY building paper! It's so strong, waterproof and windproof that in addition to its construction uses, Sisalkraft has scores of others—in the home—in industry—and on the farm.

HOME

After floors, stairs, bathtubs and mantels are in place in your new home, protect them with Sisalkraft during interior finishing—from dirt, stains, paint, and accidental damage.

Contractors can use Sisalkraft to protect partially completed work and material temporarily stored outside—to keep it clean and dry.

Sisalkraft is ideal for lining coal bins, attics, garages, summer cottages, under porch space—covering tennis courts for winter—protecting the car motor during heavy rains or washing—wrapping shrubs for winter protection—packaging for storage or shipment —and a host of other practical applications.

FARM

On farms Sisalkraft is used: to line all outbuildings, cover machinery, to make poultry houses weather tight—for practical haystack covers, temporary silos, for tarpaulins, and in many other ways.

INDUSTRY

Sisalkraft is used to protect shipments of steel—furniture—textiles—automobiles—fruits and innumerable other items. Its waterproofness keeps dampness out, or seals moisture in—its toughness protects against damage. Sisalkraft has a multitude of industrial uses. Our engineers welcome a discussion with you of your shipping problems—write for details.



Suggest Sisalkraft to your Architect and Contractor

THEY WILL RECOMMEND IT HIGHLY



See why Sisalkraft is
TOUGH—WATERPROOF—WINDPROOF
Test sample on back cover

COPPER-ARMORED SISALKRAFT

WHAT IT IS -- WHAT IT DOES

For hundreds of years pure copper has been known as one of the most durable, workable, and protective metals, BUT, the use of copper in thickly rolled sheets has been limited because of high cost. Today, electro-deposits of copper on lead drums produce thin sheets of pure copper, free from pin holes, in any width up to sixty inches. A perfect, thin sheet of copper is just as impermeable to water or moisture as a thick sheet. Thus, the protective value of copper—thick or thin—is dependent upon intact applications, not upon weight.

Thin sheets of copper need reenforcement for handling, and to assure undamaged application. THE PROBLEM IS ANSWERED IN COPPER-ARMORED SISALKRAFT.

Copper-Armored Sisalkraft is a perfect combination—thin sheets of pure electro-deposit Anaconda Copper are bonded under heat and pressure with tough Sisalkraft. It is flexible . . . will not kink or crack. The non-elastic sisal reenforcement of Sisalkraft gives copper the necessary strength to insure rapid and undamaged application.

It is an ideal concealed window and door flashing—to eliminate the possibility of leaks around these openings. Copper-Armored Sisalkraft is ideal for covering the top of foundation walls to prevent rotting of structural base timbers. As a concealed flashing in roof valleys and ridges, roof and sidewall junctures, it prevents water and moisture from seeping through. Copper-Armored Sisalkraft is also used for waterproofing and dampproofing basements—in fact many greatly varied problems of water and moisture proofing are solved by Copper-Armored Sisalkraft. It is the new way—the economical way—to durable, positive copper protection.

Copper-Armored Sisalkraft is inexpensive. That's why it is becoming increasingly popular. It is available in 1 oz., 2 oz., and 3 oz. weights. Sisalkraft folder CA-1H gives details and construction data. Write for it.

THE SISALKRAFT CO.
205 West Wacker Drive, Chicago

101 Park Avenue
NEW YORK

55 New Montgomery Street
SAN FRANCISCO

Below is a sample of

SISALKRAFT

TEST IT!

When you tear it up you will see its tough sisal fibre reenforcement—its special tacky asphalt—and its covers, pre-treated to resist shrinkage and fungus rot. You will see how all these have been combined under heat and pressure into a strong, moisture- and air-proof sheet.

Testing will demonstrate to you why Sisalkraft is better building paper—why it should be in your new home. Sisalkraft COSTS SO LITTLE and DOES SO MUCH!

As proof of the recognized quality of Sisalkraft, it is sold by 15,000 lumber dealers throughout the United States. They and we will gladly give you further information.



Suggest Sisalkraft to your Architect and Contractor

THEY WILL RECOMMEND IT HIGHLY

SISALKRAFT Building Paper is one of the most important, yet least expensive, items which can go into your home. It is called upon to protect practically your entire investment.

Ahead is the **SISALKRAFT** Section. It will be worth your time to study it carefully.

NOW YOU CAN HAVE

A

PLUMBING *or* HEATING SYSTEM

of EVERLASTING COPPER

IN YOUR NEW HOME



with

STREAMLINE

COPPER PIPE AND FITTINGS

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AT A COST THAT IS LITTLE, IF ANY, MORE THAN IRON OR STEEL THAT RUSTS, CLOGS AND LEAKS. STREAMLINE LASTS A LIFETIME AND LONGER

COPPER IS EVERLASTING

KING TUT'S NAME WAS **COPPER**

In early Egypt in the time of the Pharaohs and so on down through the centuries, one of man's greatest ambitions was to discover the key to everlasting life and it is a curious and significant fact that the "Ankh" was the Egyptian hieroglyphic for both the metal Copper and also enduring or everlasting life. It appears very frequently in the Egyptian inscription such as the cartouche of King Tut Ankh-Amen. Consequently, in one sense of the word, we can say that King Tut's name was "Copper."



COPPER ORNAMENT FOUND IN RECENT EXCAVATIONS IN EGYPT • 3200 B.C.

Copper is one of the oldest metals known to man. Throughout history it has been employed in innumerable ways to serve his purposes not only as weapons, ornaments and household utensils, but also as a building material.

This we know and can prove, curiously enough, by means of one of the qualities for which it was so valued and appreciated early in the progress of civilization—its almost unlimited life.

Wherever we find authentic records of early civilization, we find that copper has always been preferred where metal of an enduring quality was necessary. In early Egypt in the time of the Pharaohs and on down through the centuries, one of man's greatest ambitions was to discover the key to everlasting life, and it is a curious and significant fact that the "Ankh" was both the Egyptian hieroglyphic for "everlasting" and for the metal copper.

There is still in existence copper that was used in ancient Egypt for conveying water 5400 years ago. In spite of the passing of nearly 60 centuries, this pipe remains in good condition and could still be used for the purpose it was originally intended to serve.

During recent excavations in Pompeii which was covered with lava and ashes in the year 79 A.D. during an eruption of Vesuvius, copper pipe was unearthed, which was in such good condition that it could still be used today, after eighteen centuries have passed.

Although copper pipe for domestic use is a comparatively recent innovation in America, it has been in general use in the British Isles and in Europe for the past eighty years. Today copper is used wherever possible to resist rust and corrosion.

Bronze—is an alloy of copper and tin, in general base proportions of 80% copper and 20% tin. The addition of the tin to the copper is used for the purpose of making it harder but easier to machine and yet retain its non-rusting and enduring qualities.

Until a few years ago, the universal method of joining lengths of copper pipe was by threading them, so that they could be screwed into the connecting fitting. Since the thread on the pipe reduced its wall thickness, it had to be comparatively heavy so that enough thickness would be left for the service intended. The more copper is worked, the harder and stronger it becomes. It follows then that if a fitting could be developed which would not require the pipe to be threaded, that the thinner walled, harder and stronger pipe, could be utilized and still retain all its valuable properties at a great deal less cost.

With these facts in mind and after several years of experimentation, our engineers invented the STREAMLINE fitting. This fitting successfully solved the problem because it was connected to the pipe by soldering, in an ingenious and revolutionary way, by the aid of one of nature's laws known as capillary attraction. This method is fully explained on the succeeding pages of this booklet.

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On the preceding page we told you how this amazing new STREAMLINE Fitting came to be invented and how it promoted for the good of mankind, the general use of non-rusting copper. We also told you that it was connected by SOLDERING AND BY BRINGING TO OUR AID ONE OF NATURE'S LAWS. When the sap rises in the trees in spring, nature is utilizing the principle of this law. In fact, although we are not aware of it, it is going on around us, everywhere.

What do you know about the LAW of CAPILLARY ATTRACTION



Briefly, capillary attraction is that property which liquids possess of rising or being drawn from their normal levels through close fitting surfaces or capillary channels. Why this is so, no one knows, any more than they understand why things drop if you release them from a height above the floor or ground. They call this dropping of things to earth by the name of Gravitation and let it go at that. Why gravitation works this way, no one knows, yet both capillary attraction and gravitation are natural laws which are utilized by man in many different ways.

If you will look at the hand holding the two glass slides in the illustration, you will see that the colored liquid in the glass is rising between the two slides. This is because the law of capillary attraction is working. This is a simple experiment and can be performed by anyone with two pieces of clean glass and a bottle of ink, yet it explains clearly what capillary attraction really is.

On the next page we will explain to you how solder is used with a STREAMLINE fitting—how the fitting and pipe are assembled and heated so that when the solder is inserted in the feed hole of the fitting, it becomes liquid. When the solder becomes liquid, capillary attraction draws it in between the bonding surfaces of the fitting and the pipe. When the solder cools, an exceedingly strong joint—permanently leak-proof—has been made.



Coupling 45° Elbow Tee

Illustrated here are three STREAMLINE fittings that are commonly used, the coupling, the 45° elbow and the tee. Although these are but three of the many thousands of fittings which comprise the complete line for all different piping purposes, they will give you a fairly good idea of just what a STREAMLINE fitting is and what it looks like. The small holes in the fittings are called solder feed holes, and as the name implies, are for feeding in the solder to bond them to the pipe.

HOW A JOINT IS MADE WITH COPPER PIPE.. STREAMLINE · FITTINGS..

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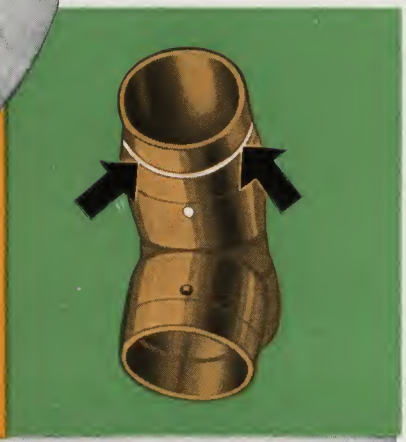




Almost like magic the law of Capillary Attraction makes STREAMLINE joints permanently tight...

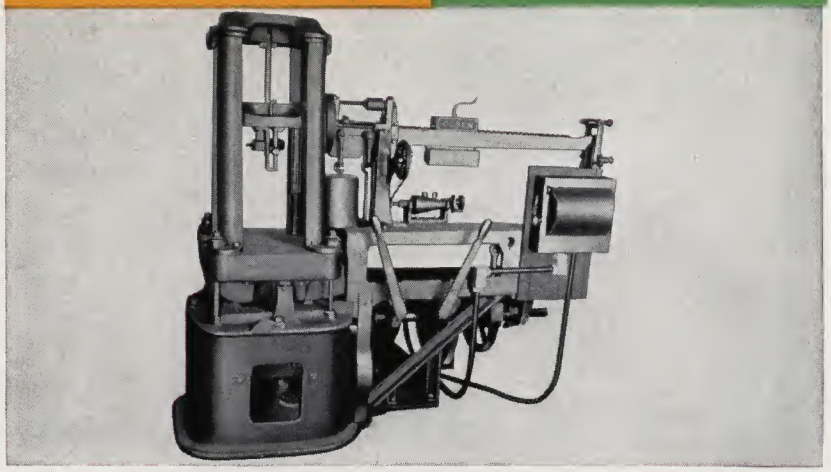
Here the plumber, who is a skilled mechanic, is heating up the assembled pipe and fitting, with a blow torch until it becomes hot enough to feed in the solder.

The plumber then removes the torch and inserts the solder through the feed hole in the fitting. The solder coming in contact with the heated fitting, becomes liquefied and is drawn in by capillary attraction and thoroughly bonds the pipe to the fitting.



Simple visual proof of a perfect joint... It's safe... There can be no doubt....

When the plumber feeds the solder into the fitting, it bonds it to the pipe and emerges at the end as a complete ring around the pipe. This is the "proof ring" — the plumber's visual evidence of a strong and leak-proof joint.



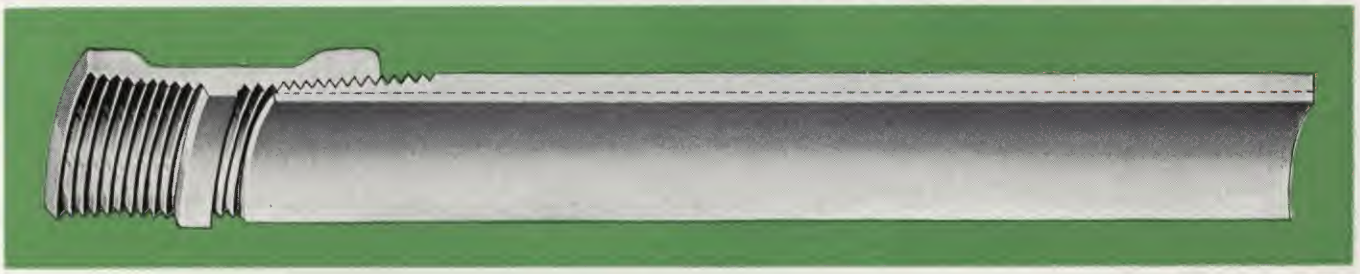
9325 LBS of PULL

Pulled it apart, but not at the joint!...

In order to give you an idea of the great strength of this joint, many tests were made in what is known as an Olsen Testing Machine. This machine is run by an electric motor and is capable of exerting many tons of pulling pressure. Even if the heaviest walled pipe is connected with a STREAMLINE fitting and tested in this machine, the pipe never pulls out of the fitting. True, the pipe will break when the enormous pull exerted from the machine reaches its breaking point, **but it doesn't affect the joint.** It never breaks the solder seal between pipe and fitting. This really proves that the joint, in contrast to other methods of connection, is actually stronger than the pipe. In ¾" copper pipe, for instance, it requires around 9,000 or over, pounds of pull before the pipe breaks. This, of course, is far in excess of anything it will ever have to withstand in actual service.



The OLD Method WHY IT IS EXPENSIVE



Everyone naturally would prefer to have a non-rusting copper installation. The whole trouble, however, was in the fact that previous to the invention of the STREAMLINE Fitting, practically all copper pipe had to be threaded into the fitting to make a connection. In order to thread the pipe, it had to have a thick wall, because the thread reduces the wall thickness. The remaining wall, however, beneath the thread must be strong enough for the service for which it is intended. Naturally, this thick wall meant extra weight and extra weight means extra cost. The STREAMLINE fitting has changed all this. See the illustration and explanation below of how this has been accomplished.

The STREAMLINE Method



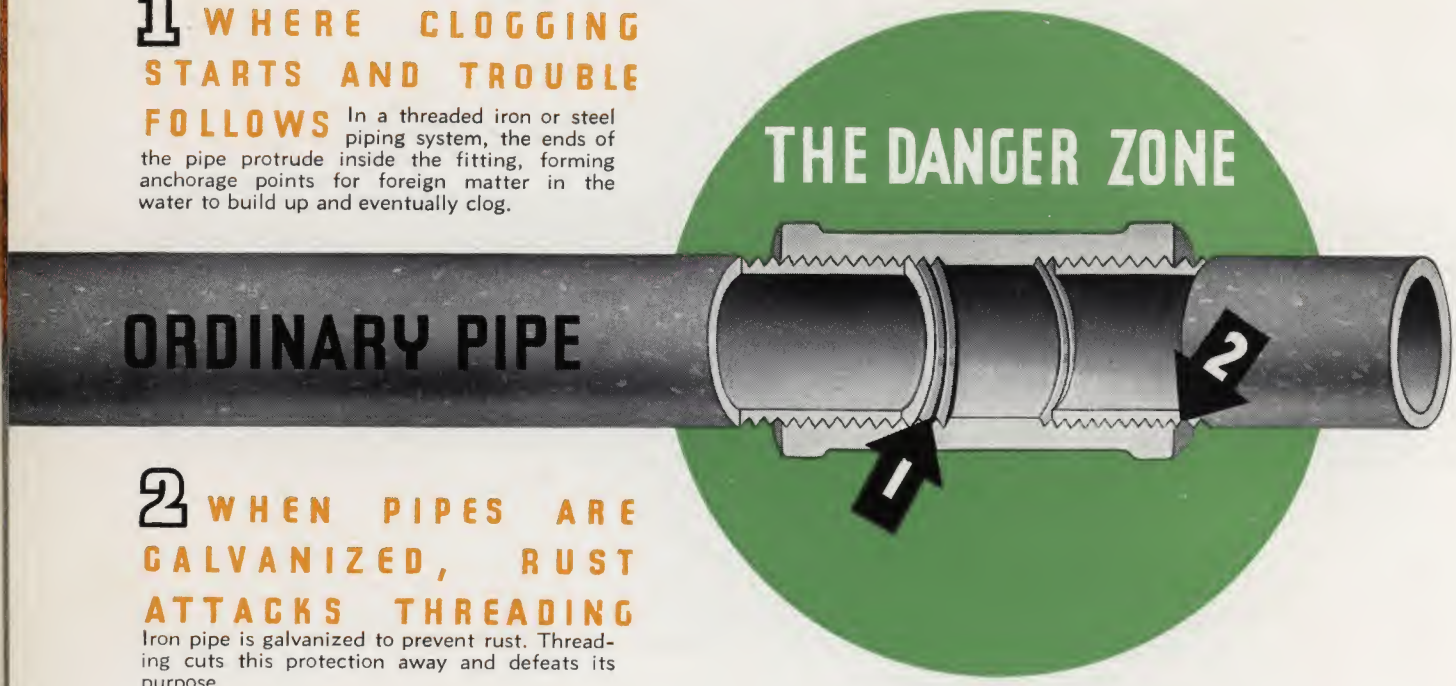
The above illustration shows a piece of copper pipe connected with a STREAMLINE fitting. The pipe has been cut away so you can actually see the end of the pipe where it fits inside the fitting. Also, visible is the solder where it has filled the feed hole and where it has bonded the outer surface of the pipe to the inner wall of the fitting. Now as explained above, since this pipe is not threaded to connect and carries no extra wall thickness for that purpose, but is joined by this new unique method, only that wall thickness required in actual service is used and that is all that you pay for. Since the copper pipe won't rust, it doesn't need an extra heavy wall and it is made hard enough by working to withstand any abuse which might affect it in service.

With the old method of connecting, the joint was really the weakest point in the whole system, while with a STREAMLINE installation it is actually the strongest.

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1 WHERE CLOGGING STARTS AND TROUBLE FOLLOWS

In a threaded iron or steel piping system, the ends of the pipe protrude inside the fitting, forming anchorage points for foreign matter in the water to build up and eventually clog.



2 WHEN PIPES ARE GALVANIZED, RUST ATTACKS THREADING

Iron pipe is galvanized to prevent rust. Threading cuts this protection away and defeats its purpose.

3 NO POINT WEAKENED BY THREADING

As explained on the previous page, the joint in a STREAMLINE installation is actually the strongest, because it is reinforced by the fitting at the point where it is connected.



4 SMOOTH AT JOINTS—NO PLACE TO CLOG

In a STREAMLINE installation the pipe is smoothly fitted or recessed into the fitting and when it is soldered, it actually forms part of it, leaving a smooth uniform waterway where there is no chance of clogging. The full flow of the water is never restricted. It remains the same year after year.

IT IS EASIER TO BREAK A BIG STICK WITH A NOTCH CUT IN IT THAN A SMALLER ONE WITHOUT



The above illustration effectively describes how threading weakens the pipe. The notched threads are potential weak spots for future breaking, especially under conditions of continual vibration and rust.

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Beautiful Glistening Streamline Pipe that

CUTS YOUR FUEL BILL

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If you place your hand within a couple of feet of iron or steel pipe in which steam or hot water is being conducted, you can feel the heat radiation. Try it with copper pipe and you will find that you must actually touch the pipe before you can determine whether it is hot or cold.

Copper pipe transfers energy much quicker than iron or steel. Heat, of course, is a form of energy and in a hot water heating system or a steam heating system, the heat is transferred through the copper pipe to the radiators much quicker and with less heat loss. The reverse is also true. For instance, in large hotels where there are pipe lines circulating ice water, the temperature of the water remains lower than if it is conducted through iron or steel.



In many cases the expense of insulating copper pipe may be eliminated. Copper will only radiate heat if inclosed in a drafthead or flue or if there is a continuous moving current of air around it. The modern concealed copper radiators which we find in buildings, generally beneath the windows, could not function unless they were inclosed so as to permit the air to travel over their surfaces by entering at the bottom and emerging at the top. A STREAMLINE system actually cuts your fuel bill.



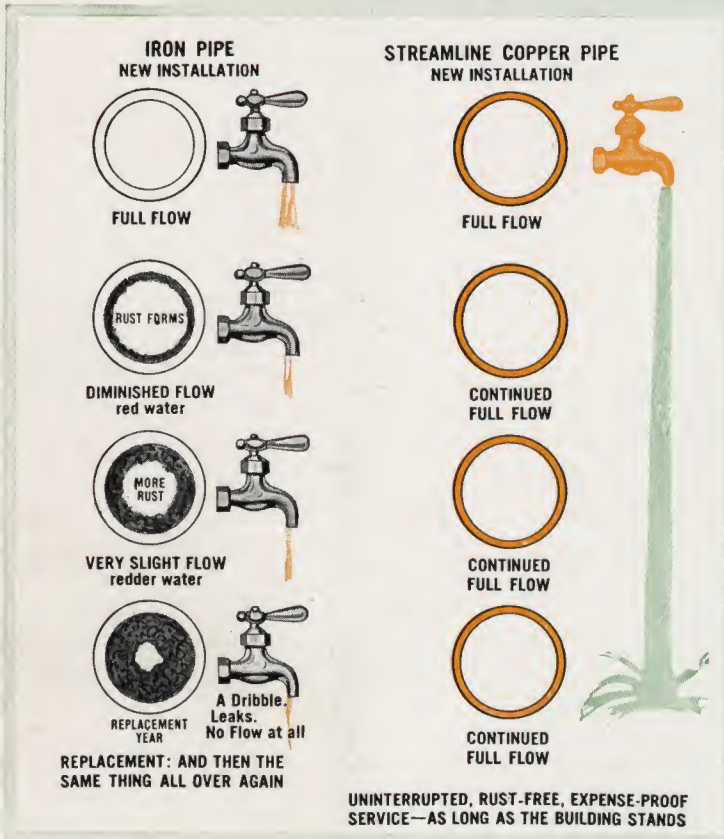
Reliable Plumbing or Heating is of Vital Importance

Every prospective home owner, whether he builds a home to live in or to sell, if he gives the subject the attention it deserves, knows that a reliable plumbing or heating system is the most important thing in it. Unfortunately, this vital matter is not always given thorough consideration. Much more time or money may be spent on the fixtures of the home for the bathroom and kitchen, for instance. This is, of course, commendable, but the home owner sometimes fails to realize that unless these fixtures are supplied with a permanently dependable piping system, that their effectiveness, no matter how modern and handsome they may be, is almost nullified. In fact, the very comfort and livability of the home depends upon a safe and reliable plumbing or heating system.

WATER FLOW UNIFORM

No Rust or Stain

An installation of STREAMLINE Copper Pipe and Fittings cannot rust and clog. Iron installations gradually rust away and in contrast to a STREAMLINE installation, the threaded joint is actually the weakest point, as explained on the preceding page. The reason for this is that the pipe wall is greatly reduced and the protecting coat of galvanized iron is cut away by threading. Corrosion in iron or steel pipe begins when it is installed and produces rust which clings to the interior of the pipe and parts of it are carried along with the water, staining porcelain fixtures and fabrics. Iron rust occupies ten times as much space as metallic iron. When rust clings to the inside of the pipe it does not take long to clog it and almost from the time of its installation, the waterway is being gradually decreased. When 1/27 of an inch of corrosion takes place on the inside of a 1-½″ pipe, it will completely clog it with rust unless the water pressure were sufficient to partially carry it away. The smaller the pipe, the quicker the action. A 1″ pipe requires only 1/40″ corrosion to fill it with rust.



The illustration herewith gives a clear idea of what actually happens in an iron installation as compared with the STREAMLINE copper installation. The iron or steel pipe gradually clogs until its waterway is almost eliminated, the result being a gradually diminished supply of water containing foreign matter which is continually breaking away and being carried through the faucet by the flow of the water. You have seen bath tubs that took an hour to fill and heating systems that no matter how much fuel was burned, failed to deliver a comfortable room temperature and in fact, some rooms couldn't be heated at all. In 90% of the cases this is due to rusted, clogged pipes.

The flow capacity of an installation of STREAMLINE copper pipe and fittings continues to be uniform and free, delivering a maximum flow year after year. Heating systems are maintained at their maximum efficiency.

Withstands Fire In the event that fire broke out in close proximity to a STREAMLINE installation, the soldered joints could not fail for the reason that the melting point of solder is higher than the boiling point of water and as long as water is in the line the heat cannot affect the joint.

Thin copper tube has been used very successfully for years for water heater coils. Can you think of any test more severe than this?

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VIBRATION

WILL NOT LOOSEN IT

Vibration or shaking caused by continual heavy traffic or from the water pressure, when the faucets are opened or closed, gradually loosens the threads of an iron or steel pipe system, causing a leak. This weakening of the joint is in most cases aided by the action of rust, the joint being very susceptible to it because the protective coating of the galvanized metal is generally removed when the thread is cut. STREAMLINE has a reinforced joint and vibration is harmlessly dissipated throughout the entire system.



CAN WITHSTAND TREMENDOUS PRESSURE

Copper pipe can successfully withstand very high internal pressure, in fact many, many times greater than it ever would be called upon to do under normal service conditions. Any danger from bursting under ordinary conditions is so remote as to be negligible. ½" STREAMLINE Copper Pipe of the thinnest wall, for instance, requires about 9000 pounds of internal pressure to burst it.

COPPER IS DUCTILE, IT EXPANDS WHEN WATER *freezes*

Copper pipe is manufactured either in hard or soft temper. When furnished soft, it is quite pliable. Owing to this quality of ductility or pliability, it can withstand repeated freezings without bursting and may also be bent around obstructions at places where it would be inconvenient or unhandy to connect it with an elbow. Sometimes, particularly in installing water services, obstructions are encountered which would cost a great deal more to remove than the extra length of copper pipe required to go around them.



SECTION OF EGYPTIAN COPPER WATER PIPE FOUND AT ABUSIB; 2750 B.C.

STREAMLINE COPPER PIPE IS EVERLASTING·NO FAILURES FROM RUST EVER. . . .

Copper cannot rust. It is practically everlasting under ordinary conditions of soil and water. In a very few sections of the country, where the water is acidulated owing to certain elements in the soil through which the water passes, it may attack the pipe but even under these conditions, it will last a great deal longer than almost any other practical material and a great deal longer than iron, which rusts under any condition.

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If the STREAMLINE Fittings and Copper Pipe were removed from a building after years and years of service, they would be just as usable as the day they were first installed.

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Make these COMPARISONS

If you will glance at the two pipes on the right-hand side of this page, you will notice first the vast difference in appearance between galvanized iron pipe connected with a threaded fitting—and STREAMLINE Copper Pipe, connected with a STREAMLINE fitting. Although the copper pipe appears to be smaller and actually is smaller in diameter than galvanized iron pipe of the same nominal size, the copper pipe has as great, or sometimes greater, internal flow capacity than the iron.

The inside of the copper pipe system is perfectly smooth. There is nothing to retard the flow. The iron pipe is comparatively rough and at the point where pipe is threaded into the fitting there is a restriction in the flow on account of the pipe ends and other obstructions which cut down the water pressure. Naturally, the more screwed fittings used in an installation, the greater the restriction of its flow capacity.

The men who produce the plans for a plumbing or heating system in iron pipe know that in a short time it will rust and consequently clog on the inside. Therefore, they very often start with a larger size than is actually required in order to make up for the gradual restriction and loss of pressure which will result as time goes on. This cannot happen with copper pipe.

Note also the compact, handsome appearance of the copper pipe.



Galvanized Iron pipe and screwed fitting



STREAMLINE Copper pipe and soldered STREAMLINE fitting



CAST COPPER BULL'S HEAD FOUND AT UR; C. 3200 B.C.

Not only is valuable space saved on account of the neater, smaller and more compact pipe and fittings in a STREAMLINE installation, but it actually requires less working room for the handling of tools. When threaded fittings and pipe are installed the workman must use a wrench to tighten them into place and he must have room to use it between the pipes. STREAMLINE is not threaded and does not require this extra room. The pipes are located exactly where required and soldered.

Bright, shining copper pipe, and it may easily be kept in this condition, not only gives you the most efficient plumbing or heating system you could have, but actually increases the efficiency of the fixtures in the home. Faucets deliver a full volume of clear water, unstained with rust,—hot water is delivered hotter and faster. Radiators gain their maximum efficiency in keeping the building comfortably heated.

DON'T MAKE THIS MISTAKE

When you are remodeling your worn out plumbing or heating system, don't make the mistake of replacing it with another of rustable materials which in a few years may again have to be replaced.

Iron or steel piping which has been in service for a number of years, may still appear to be in good condition if you judge by outside appearances, but it is almost a certainty that the walls of the pipe in many places are nearly rusted through and that the conducting area of the pipe has been greatly reduced by an accumulation of rust and other corrosion.

In large apartment buildings the problem of replacing a worn out, inefficient plumbing or heating system does not involve merely the cost of the labor and new material for remodeling, but the building manager may be faced with a much more serious one, the loss of his tenants, and rent. The problem of keeping tenants satisfied while their water supply or heat may be temporarily, and from time to time shut off, together with the many other inconveniences of the remodeling program is actually a very grave one.

Installing copper in new construction is the safe thing to do, but if remodeling must be done, the only solution is STREAMLINE. You will never again have a repetition of the trouble.





Satisfied Tenants

No matter how well the work on a plumbing or heating installation has been performed, if the materials used are of inferior quality, dissatisfaction, trouble and expense are bound to result.

Superior materials and workmanship on plumbing and heating installations are one of the greatest contributing factors in keeping tenants satisfied—and in keeping satisfied tenants.

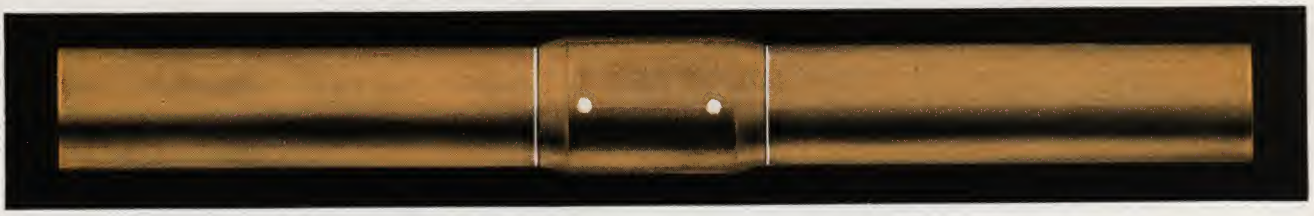
STREAMLINE Copper Pipe and Fittings, once installed, will give you no further worry. They will render uninterrupted service, year after year. Make certain that they are specified and installed in your new home or building, or for remodeling existing properties.

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STREAMLINE Copper Pipe and Fittings have been used in thousands of installations and in every type of building construction throughout the United States and Canada during the last five years. They are proving eminently satisfactory.

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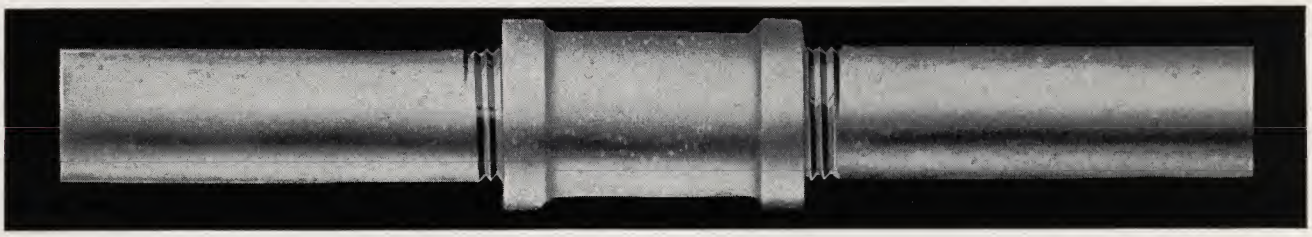
Modern Architects Indorse the STREAMLINE *System*



STREAMLINE Copper Pipe - - Neat, Compact - - Cannot Clog with Rust. Continues to deliver its maximum Capacity of Unstained Water Year in and Year out. Its First Cost of Installation is Its Only Cost and Your Best Insurance Against Future Repair Bills and Damage to furnishings.

The modern architect and engineer is continually searching for new and efficient products for building construction. The architect primarily is interested in seeing that his client obtains satisfactory materials and practical workmanship. He must be convinced that a product will do what is claimed for it before he will specify its use. Before adopting any new product, he makes certain that it is an improvement on what was formerly used and according to his best judgment will perform satisfactorily.

The modern architect recognizes in STREAMLINE a new and revolutionary principle in piping methods —in their method of connection—in their long life —and last but not least, in the fact that a non-rusting, non-clogging piping system that will function efficiently as long as the building stands, is now within the reach of the investor of moderate means. Many of the most prominent architects in the United States indorse and specify STREAMLINE Copper Pipe and Fittings.



Iron or Steel Pipe Rusts and Clogs. The Joints Loosen by Vibration. Rust-stained Water is Delivered at the Faucets. Leaks and Failure are Only a Matter of time.

Ravages of Rust Authority declares that all the metal produced in Great Britain would be insufficient to replace the steel and iron structures which fail annually throughout the world because of rust. It has been estimated that rust costs the United States $300,000,000 a year.



An average 7 room home can have

a STREAMLINE installation

at little if any additional cost

STREAMLINE Fittings and Copper Pipe in certain installations may cost more than ordinary threaded iron pipe and fittings—but the possible extra cost is so little, considering the trouble-free service it gives, that it is relatively unimportant. For instance: In the average six to eight room house costing from $5000 to $8000, the extra cost of a STREAMLINE installation would range from about $15.00 to possibly as much as $30.00, in some instances, depending of course, on the extent of the plumbing and heating system.

You couldn't call that expensive when you realize that it is probably less than ½ of 1% of the value of the house—and for this you are getting lifetime, trouble-free service. There will not be any future repair bills. The first cost of installing STREAMLINE is the only cost—and when you think of it, even one single case of pipe failure with its consequent leaks can do far more damage than this slight extra cost.

Ordinary iron or steel pipe and fittings are bound to rust and fail in time and such failure is, almost invariably, expensive . . . not only in replacement of the piping but in damage to the home and its contents . . . INSTALL STREAMLINE FITTINGS AND COPPER PIPE . . . they will give you rust-proof, clog-proof and leak-proof service for the entire lifetime of the building . . . and longer. Moreover, they will insure maximum efficiency from your hot water heating plant. The hot water or steam is delivered to the radiators much quicker and with less heat loss.

Under normal conditions where copper pipe is not subjected to a moving current of cold air, considerably less insulation is required because copper pipe radiates about 50% less heat than iron.

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See your ARCHITECT *and Contractor*



Consult now with your architect and contractor. Be sure that your architect draws up his specifications to include STREAMLINE Copper Pipe and Fittings. Tell him that you want the life long protection that this material will give. Do not allow any substitution. Insist upon genuine STREAMLINE Fittings and Copper Pipe. The STREAMLINE Fitting is the original solder type fitting. All others are imitations and do not have the valuable, exclusive features which STREAMLINE has.

When your architect specifies STREAMLINE make sure that your contractor actually installs it. Don't let him use "just any" copper pipe and fittings. STREAMLINE Fittings and Copper Pipe are easily identified. The word STREAMLINE is stamped on the copper pipe every few inches and appears also on the fitting.

Even though you have already planned to use "ordinary" pipe and fittings, you can change to STREAMLINE Fittings and Copper Pipe. The additional cost is slight in comparison to the cost of the home . . . and the protection is PERFECT. With STREAMLINE Fittings and Copper Pipe inside the walls you need have no fear of pipe failure, damage to walls, ceilings and furnishings, expensive repairs and inconvenience.



For Modernizing Your Present Home

If your home at present is equipped with the rustable type of pipe and fittings, it is probably beginning to give you trouble. If not now, it is inevitable, that in a comparatively short time, it will. The pipe will clog, rust, leak and deliver impure and rust-stained water. Why not for safety's sake have the present worn out system replaced now with STREAMLINE Fittings and Copper Pipe . . . have it done before the damage happens. Don't make the mistake of replacing the worn-out plumbing or heating system with another system of rustable pipe and fittings that will again in a few short years begin to give you trouble.

Consult your PLUMBING CONTRACTOR

Your plumbing contractor is an experienced and capable mechanic. He knows how STREAMLINE Copper Pipe and Fittings should be installed. The great majority of plumbing contractors have already installed STREAMLINE in many buildings. They know how effective a STREAMLINE system is. They also know that when they have installed this system they will never have any complaints from you. For further proof of what you have read in this booklet, consult your plumber. He can give you facts from his own experience.

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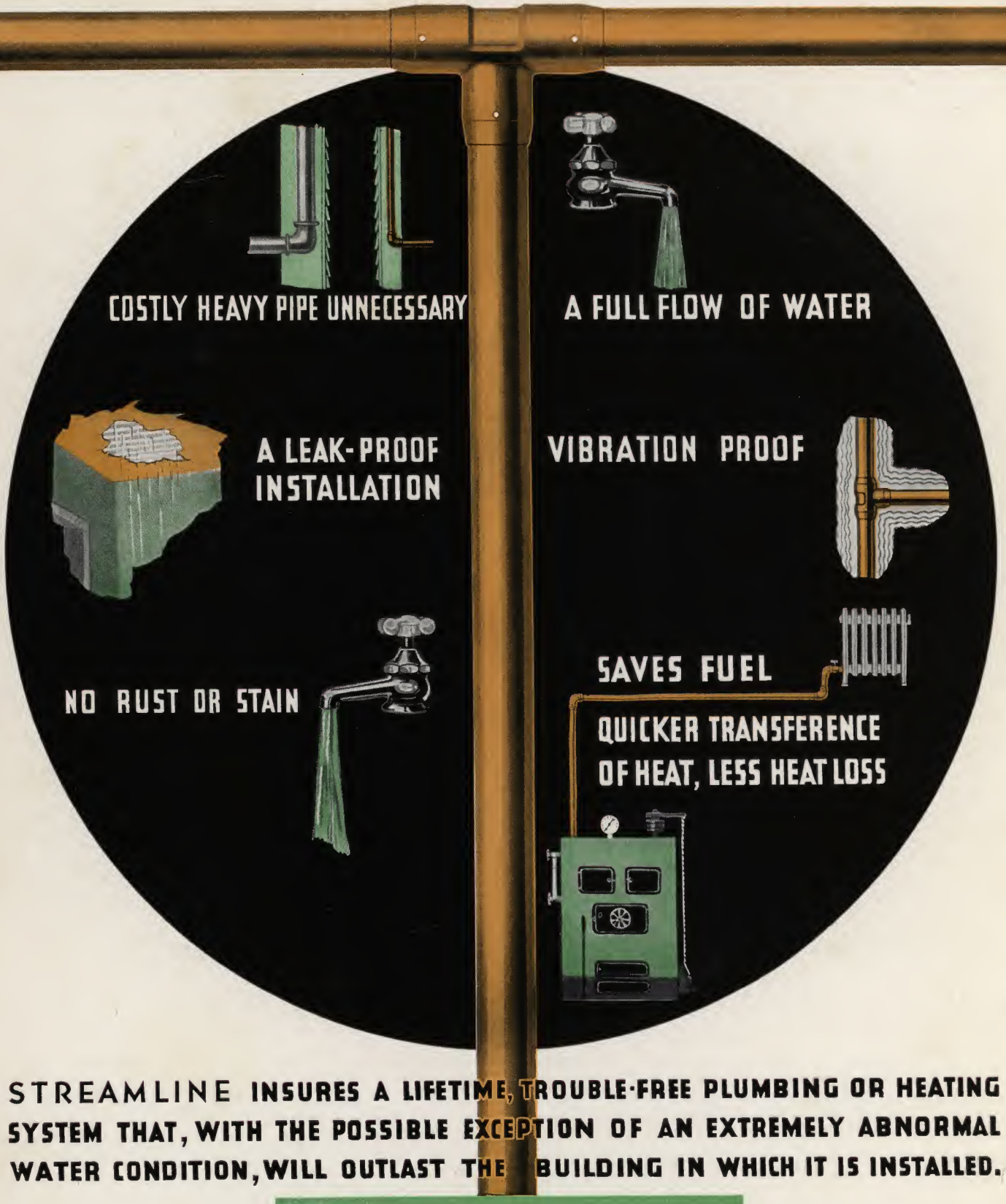
Remember too, that no matter how modern and expensive your bathroom and kitchen fixtures may be, their effectiveness depends upon a permanently reliable piping system. The home, like a human being, is only as young as its arteries.

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A PLUMBING OR HEATING INSTALLATION OF STREAMLINE COPPER PIPE AND FITTINGS MAKES ANY HOME MORE ECONOMICAL AND COMFORTABLE TO LIVE IN AND EASIER TO RENT AND KEEP RENTED OR—TO SELL AT A HIGHER PRICE.

ITS FIRST COST IS ABOUT THE SAME OR VERY LITTLE MORE THAN RUSTABLE MATERIALS AND—THIS FIRST COST IS THE ONLY COST.

ADVANTAGES



STREAMLINE INSURES A LIFETIME, TROUBLE-FREE PLUMBING OR HEATING SYSTEM THAT, WITH THE POSSIBLE EXCEPTION OF AN EXTREMELY ABNORMAL WATER CONDITION, WILL OUTLAST THE BUILDING IN WHICH IT IS INSTALLED.

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